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031



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SiP - Stuck in Plastic

In this issue of HispaBrick Magazine®

- 5 Editorial
- 7 How to organize a toy photo safari in 10 minutes
- 10 Interview: LEGO® Creator Expert
- 17 Bring back monorail?
- 22 LEGOLAND Japan
- 29 Meet the Winner of the 2018 LEGO® Ideas Trophy Design Contest
- 32 Creating Custom Blocks with The Creative Toolbox6 Programming the EV3 with Swift Playgrounds



17

- KOCKICE Corner
- 38 LEGO® Architecture Skylines
- 41 Minidolls vs Minifigures
- 43 LEGO® Animals
- 48 LEGO® World Copenhagen,
- 51 Space Interview



22

- 55 Japan BrickFest 2018
- 60 Brickfest Chile 2018
- 63 Website Review – EV3Lessons.com
- 65 The LEGO® Boost Idea Book
- 67 Review 75222 - Betrayal at Cloud City
- 73 Review 10261 - Roller Coaster
- 77 Review 21042 - The Statue of Liberty
- 80 Review 21041 - Great Wall of China
- 83 Benny's Corner by Luigi Priori
- 84 Desmontados by Arqu medes
- 85 How to collaborate with us
- 85 Our collaborators on the Internet



67



10

Editorial

Jetro de Château (linmix)



Every issue of HispaBrick Magazine® is a window on the world of LEGO® fans. It is a window for those who read it, and even more so for us as we put together the magazine. Our first issues relied on the generous collaboration of AFOLs we talked to on a regular basis on the forums we frequented. However, as time went by, more and more of the content of the magazine came from collaborations with people we might not otherwise have come into contact with.

On the one hand we have been privileged to interview a considerable number of people who are directly or indirectly part of The LEGO® Group. We interviewed the general manager of LEGO® Iberia in our first issue, but soon transcended our borders, interviewing Tormod Askildson (Head of AFOL Engagement), Kjeld Kirk Kristiansen or Jørgen Vig Knudstorp. In this issue we meet up with Jamie Berard, again. We interviewed him in issues 007, 011 and 016, so it was high time we had another chat!

On the other hand, the magazine has put us in touch with many AFOLs around the globe who have worked with us to contribute articles. In this issue we have contributions from Japan, Australia, the USA, Malaysia, and Chile, as well as from half a dozen European countries. Sometimes these contributions come from a single AFOL, and at other times there is an entire community behind the effort. Great examples of the latter are our collaborations with the toy photographer collective Stuck in Plastic and the Croatian RLUG Kockice.

And sometimes these collaborations pass almost unnoticed. After celebrating our 10th anniversary in the previous issue we decided it was high time to renew our website. When the ambassador of the Serbian RLUG Beokocka heard about our needs his community came to the rescue. Most of the work on the new website was carried out by one of their members, Jónás Kovács, who did an excellent job and got one of our long-standing projects off the ground: a practical index of all the articles that have ever been published in our magazine (and how I could easily find our previous interviews with Jamie). Thanks to the support of Beokocka we now have a new, easy to navigate website and two newsletter options, one to be notified of each new issue and another for our blog.

Last, but not least, there is you, dear reader. Your interest in HispaBrick Magazine®, your sharing it with your community and letting us know what you think of each issue provides yet another window on the world of LEGO® fans. Thank you for being part of our project!

#



I love Paris – by Ballou34



How to organize a toy photo safari in 10 minutes

by Julien Ballester (aka Ballou34)

After going to Sweden, Germany, or the UK we (see Stuck in Plastic [1], the international toy photographer collective) organized our annual toy photo safari in one of the most beautiful cities in the world: Paris. I know, I am a bit biased because it's my home city and I was the one organizing it.



The Fellowship of the Brick – by Shtacyp

But what is a “toy photo safari”?

To explain simply, it's a gathering of people trying to capture snapshots of toys coming to life in outdoor environments. Like if we were chasing animals in the savanna for pictures – we are doing the same with our LEGO® minifigures.

For this edition, which we have called ‘SiP goes Paris 2018’ [2], 20 people from seven countries (Czech Republic, England, Finland, Germany, Sweden, Turkey and France) came to Paris. We spent three full days and walked around 50 km, taking thousands of pictures with hundreds of LEGO® minifigures (and a few other toys).



Ready for a great toy photo safari - by Ballou34

If you want to learn more about what we did during those three days, I invite you to read our blog post on the subject (<https://www.stuckinplastic.com/2018/06/sip-went-paris-2018>) as well as the nice comments people left on our digital guest book (<https://www.stuckinplastic.com/2018/07/sip-went-paris-2018-the-guest-book/>).

Toy photo safaris are a great opportunity to meet other people who share the same passion for toys and photography. We, at

Stuck In Plastic, organize international meets, but you can also organize a local meet-up in your area. So, let me share with you some tips I learned to make your own toy photo safari a great one.



The ghosts of the Louvre – by HerrSM

1) Social media

When you organise an event like this, talk about it online. Social media are a great way to invite people to come and participate. To help with your communication, have some kind of picture or poster that you can use to talk about it and a hashtag corresponding to your event so that people can use it when sharing pictures online.

In our case, I used a picture that I took on the heights of Paris and I even created a logo corresponding to the hashtag of our safari #SiPgoesParis2018.



Welcome to Paris - by Ballou34

2) Location

When you come to a toy photo safari, you will be discovering the city/place you're in so as to take pictures in cool locations. A minimum of scouting is necessary in advance to prepare for it. If you live in the area, you should know some nice places to bring people to. It's not always easy to know how long people will like to stay in one spot to take pictures so be flexible with the schedule. No need to rush.



Sacré Cœur – by Lolitabrick

For SiP goes Paris 2018, I had a tour of Paris prepared on paper. Everyday, we would go to different places in the city and reach them either by foot or public transportation. Except for the first location of each day (and the dinner, which I booked - see below), no specific time was planned. That way, if people liked one place in particular, we could spend hours there without feeling rushed for time.



Happy together – by Mickebq

I brought everyone to the famous landmarks in Paris (the Eiffel tower, Notre Dame Cathedral, The Louvre pyramid, the Sacré Coeur) but I also wanted to share some lesser known places where I like to take pictures (a cemetery in Montmartre, some abandoned train tracks, and several parks and gardens).



T-Rapped in Paris – by Reiterlied

It's interesting because when you come back to these places with friends you discover them from another angle, another point of view. Even though we all spend time in the same location, we won't all use it the same way and that's very instructive.



Dashing in Paris – by Nutelasabe

3) Food

Food is important :)

Despite spending time together taking pictures, photography is a solitary pastime. Indeed, although it is great to collaborate with other toy photographers on pictures, most of the time you are in your own bubble, creating stories. So it is important to have some social time together when taking breaks. And lunch and dinner are the perfect moments.



French spiders – by Fubiken

So if you are planning a meet-up on a day, organize lunch in a restaurant, and if you plan one taking place over several days, you can pick up sandwiches for midday and have dinner in restaurants. It will be a great time to chat and socialize with your fellow photographers. So pick a good restaurant and people will be happy.



Too much wind – by LEGO_fun

4) Activities

One thing we like to do during our toy safaris is the print exchange. The idea is simple. You bring prints to give to others and in exchange you will receive the gift of prints from everyone else. It's a great time. It does get a bit messy when the prints from everyone are moving around the table but you will leave with great souvenirs. I love it. Personally, after a toy safari I will bring these prints back to my office and hang them on the wall. It's a living wall growing like a disease at work. A lot of colleagues are coming to my office, just to check out the new additions.



Making friends – by Stepping_on_bricks

Another thing we did on a previous toy safari was the "One toy to share" (<https://www.stuckinplastic.com/2017/10/one-toy-to-share-in-scotland/>). For that, we brought one toy and everyone had to take a picture of it during the weekend. It's fun to see how we all used it in a different way with our own style. It's a good exercise that we need to try again next time.



Vroom vroom – by Pulup

For this toy photo safari, we improvised a big football match (that's 'soccer' for our friends on the other side of the pond). Everyone put some minifigs around in a sports event and we took pictures of them. It's funny to see how we all framed this match differently. It shows how collaboration is something really fun to explore during toy photo safaris.



The soccer match – Picture by @Reiterlied

5) The people

In the end, with all the preparation you can put in, the best thing to do is to have fun. It's ok if you have to improvise. Some events that you did not plan will occur during the weekend, and you will just have to roll with it.



The little world of Paris – by Eatmybones

But the most important thing is that you are among friends. You will learn a lot from the people who will accompany you. Spending time with people is why we do those events. We are not just Instagram handles. We are people.



The traditional Sigfig groupie – Picture by @_Me2_

Last words

I hope this article will help you make a leap of faith. You can join us for our next toy photo safari that will take place in 2019. We don't know the location yet, but we are working on it. We hope to see you there.

Julien and the Stuck In Plastic crew
#

- [1] <http://www.stuckinplastic.com>
- [2] You can find all the pictures of the event using the hashtag #SiPgoesParis2018 on Instagram



Interviews

Interview: LEGO® Creator Expert

By HispaBrick Magazine®

Images by HispaBrick Magazine® and LEGO® System A/S



HispaBrick Magazine®: Can you please tell us your name and position in the company?

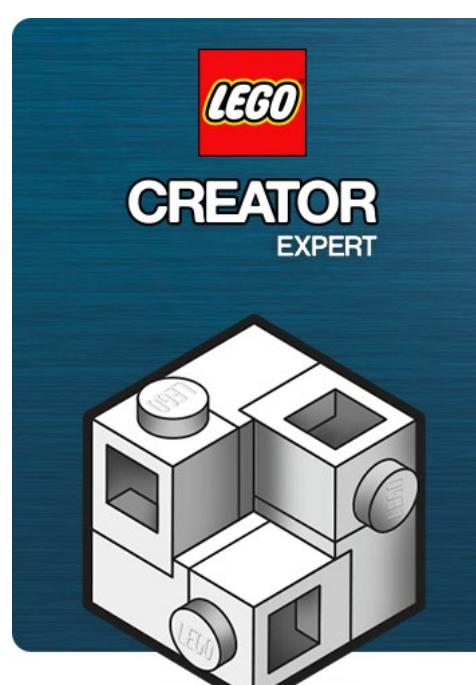
My name is **Jamie Berard** and I am a design manager specialist for Creator Expert and LEGO® Architecture.

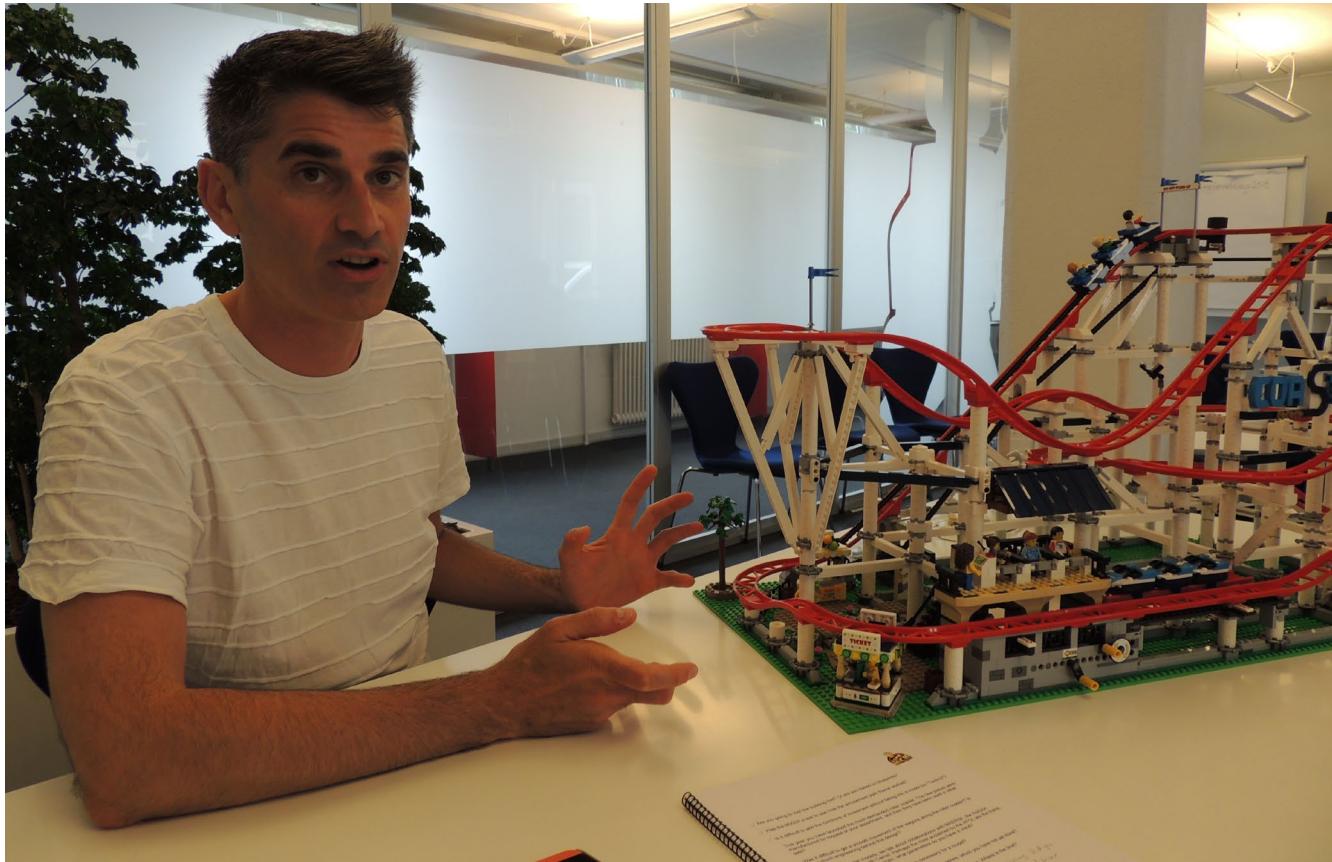
HBM: Who is the target audience for the CREATOR EXPERT series?

JB: Our main focus is on adults and the core is adult LEGO® fans, but over the years we have found that there is a broader selection of people who are into the series. We have a lot of data from NPS (Net Promoter Score) showing that there are a lot of kids who are aspiring to build the larger models and love them. We also have things like the seasonal set that get a really weird cross section in a wonderful way: adults, grandparents... all kinds of people. But when we design models, it is for adults and the adult fans.

HBM: At the beginning they were called "advanced models". Why was the name changed to CREATOR EXPERT?

JB: We used to call them Exclusives (D2C Exclusives). The things is they never had an external name. You guys (i.e. the fans) were clever enough to come up with "advanced" and all these other names, but we found the markets were calling them the 10,000 series and other names and it was actually very hard to find them. How can you search for them if they don't have a name? That's when we decided to go with "Creator Expert", because the closest connection we had was with the Creator team. That's what many of the models extend from, and then we just thought this would be the upper-age version. But even within that there are still some things that we do that don't always fit in as an extension of Creator, yet we are the group that always ends up doing them because we will take the opportunities that are there.





Jamie Berard with the latest Creator Expert set, the Roller Coaster

HBM: Where did the idea for the CREATOR EXPERT logo come from?

JB: Isn't it great? I think it was Roberta. She's one of our graphics people. We were trying to come up with all different kinds of things and we were talking about different elements that were special to us and the Erling[1] came up. She came up with that masterful thing. I can't take any credit for it, but I like it. I think it is very cool.

HBM: Let's talk about the models. Within the line there are modular buildings, scale vehicles, the winter series, the architectural series, the attractions of the amusement park and other unique models. How many people are dedicated to the design of these sets?

JB: The best way I can describe it is I have three dedicated resources for Architecture and Expert combined. Then we get celebrity guests and we bring people in to do models as needed. So, there's a core group and there are always at least one or two people who are in our group temporarily, working on something.

HBM: Are there separate teams according to the theme?

JB: For the most part Architecture is pretty much Rok and Lars Joe who used to be in charge of the Architecture line completely. Now he's leading that group, but also building. Expert is always Mike Psiaki as our core and then we bring in different people to work on it. The roller coaster was mostly Robert Heim, who was actually from the MINECRAFT team at the time, and Carl Merriam[2] from the Boost team also worked on this.

HBM: How is the theme of the modular building (Fire Department building, and American Diner) decided?

JB: We had much more vision mapping in the early days. We knew when we launched the Café Corner that we were going to do the Green Grocer and a Firehouse. After that we had five-year maps which we found we didn't always use in the order that we thought. We would shift some ideas forward and move some back. Now we have ended up realising that it is actually a little more fun to allow for three different options to be explored and then try to choose which is the best option at the time or mixing them together. So, to say that next year we will be doing a certain building is probably a bit premature because we want take in all the ideas and maybe we are surprised and do something else. We also have building boosts right now where we sometimes get some really fun ideas like the boxing ring for the diner. That came from a building boost where one of the designers proposed that as a theme.

HBM: Do you think these are the models where you get the most pressure from the fans?

JB: I think they have a higher level of expectation and there are also more people doing them, so there is more to benchmark against. There are so many people who have made fire stations and police stations and banks that when we do a bank or a fire house there are already fifteen others where people say "I like this guy's better" so we found that we really need to keep our game high, trying to surprise you guys. Even if it is not a new idea to do a bank, if we do one we want to surprise you with some fun and interesting ways of using the elements or maybe attaching a laundromat next to it which is something that I hope hadn't been seen before. That's where I think it puts a little more pressure on us to think of something fresh.

HBM: Do you inspire yourself in any way from MOCs that you see online?

JB: I am inspired by everything. It is less likely that I am online searching. I have to admit that I am not very active online in general. I don't have time to go through websites, but I do go to fan events and then I get inspired by seeing things in person and talking to people, because when you talk to them they are more likely to open it up and express their thoughts behind it. That is very inspiring. But sometimes it is also tough, because there are some ideas out there that are fantastic and then I'm like: "Ah! That would be amazing to use!" But now I know someone has already done it, and that will often spark me towards thinking the idea is neat but maybe I can take it in a different direction. At least it sparked my thinking, but it also prevented me from doing something. More often than not when a set comes out and there is a similarity and people say something is similar to another build my hope (at least when I do it) is that those are happy coincidences and when you make things there is inevitably going to be some overlap. But I genuinely want to feel that when we launch something it is our own creation. Of course, we are all influenced by each other, but I would never want to take something and just throw it in.

HBM: How do you deal with the criticism?

JB: I genuinely love it. I know a lot of people think that is weird, but I think that whether people love it or hate it, if they are talking about it then I am happy. Because that means they have an interest. The worst thing in the world is when something launches and everything goes quiet and you can only hear the crickets chirping. That is like death for me. We really missed the mark if people don't like it.

HBM: Does that ever happen?

JB: Fortunately for us not so much and I can't even think of an example now, but there have been occasions when people have just sort of nodded and that's it and you get the feeling you could have done better. But when the Fire Brigade came out it was as if I had just slapped someone's mother. People were offended. They felt it was so American and the flag was hideous, and "it's only two floors, everybody knows the modular are supposed to have three floors", etc. There were so many people being critical, but in the end, I learned that it is the modular which brought the most people into the modular line. And it did very well. Even compared to today it did very well. And yet if you just read the fan forums at the time, many people were offended. I really just thought I had ruined the whole line. But I was naïve to the idea of thinking how much people were talking about it. And then I learned that after a short period of time they got used to the changes, and they started to say it is the changes we actually like, it's different. It is strange how more often than not fans' initial reaction is "I don't like it if it is not what I was thinking" and then as soon as they start to look at it again, they go "but I do kind of like that" and then they dig into it and change their mind. My hope is that if I can be patient enough and listen to people genuinely I can filter out what is the real issue and what is "this is uncomfortable to me right now" but they will adjust. That's a fine art. We don't always get it right, but I think we are getting better at filtering.

HBM: What is your preferred Modular Building? The one you are most proud of?

JB: I would say Assembly Square was a big moment for me. It was nice to bring together the whole department and a lot of people contributed to that and it was really fresh and fun. But if I think back to the one that I enjoyed working on the most I think that was the Parisian Restaurant. I had come off of two years of not doing the modulars, Astrid had done the

previous two, and there was something about stepping away from something I loved doing and coming back to it. I was just having fun. That is the best way I can describe it. Things were coming together naturally. I had too many ideas and I just had to make it work together. It was a very different experience for me, to go to something I had done many times before and start all over again and love it again.



10243 - Parisian Restaurant

HBM: Have you ever noticed modernist buildings of architects like Gaudí? If so, are they too curved to be reproduced with LEGO® bricks?

JB: It's a wonderful style that is very difficult to capture well in LEGO®. Even in person you have to be there in some ways to appreciate and see it and enjoy it, and with our limitations of the bricks it could potentially just look messy. That is even a challenge we have making 'normal' buildings: pull back on the details, hold back to allow something to work. It can get very dense and your eyes can get lost. My fear is that this is a particularly difficult style of architecture and I'm trying to think of a scale that would allow it to work well, but it is a good challenge.

Have you seen any version that people have built that worked well?

HBM: Just one, and it was OK, depending on the perspective.

JB: Yes, and that's it. Sometimes you see a photo when you look online designed for one nice shot. I remember seeing a couple of things in the past, years ago, on The Brothers Brick. There was another one where they had a beautiful black and white creepy house and it was just wonderfully crafted. And when you first see it you think it is minifigure scale, because that is how we all think. Then I started looking at the details and saw it was much taller. Later on, I saw some images of the side and realised it was totally built just for that image. If you turned the camera half a degree you would have seen all the blind spots. I was really impressed when I first saw it, but if you are really just building for a photo, and you sneeze and it falls apart... then I lost a lot of that initial excitement.

HBM: Regarding the scale vehicles, do you decide the model you want to design? Or does it come at the request of the commercial department?

JB: Those are mostly our wishes of what we would like to do.

We are very fortunate to be in a position where a lot of car companies approach us and would like to partner with us. We just have to think of what is the mix or balance that we want to accomplish. I can't take credit for the choices but I'll propose what I think I would like and then it gets approved. That's more of a mapped thing, a little bit more than the modular buildings used to be. With the vehicles we have a lot more depth and understanding about which ones we want to do and why and so we have ideas on when this one exits we can bring in something else because it is capturing a similar audience. But we want to make sure there are different audiences for each one, so very hopefully you will see them and have your favourites, but not necessarily want all of them, but then we are covering enough people with the variety. It is a little bit like the modulars as well. We try to make sure that each of them is different so they don't cannibalise each other.

HBM: At what level is the model manufacturer involved?

JB: Quite a bit. Some more than others. Without going into specific conversations with some of our partners, I think there have been some instances where they are super particular, down to the angle of the windscreen where a degree off is wrong, that is someone else's car and you need to get that right. We have actually had instances where the interpretation in LEGO® is not fully understood by the partner, when they are used to working with die-cast cars or something. And that has taken a lot of work to try to make them come around, to compromise, and then we will show them something like the VW Camper Van, which is a series of compromises. The shapes on the front are meant to all be curved and smooth, and even just the A-pillars on the side of the windscreen and the front; there are so many things that have been LEGOised yet are wonderful, and everybody loves it. It's a great product. So we often will try to use that and say "we know this compromises, even the doors having to go in and the hinging and stuff like that, but this is what people love about LEGO®. And for a car person that is all above the line in every little shadow and detail, to get them to accept this gauge on the side of their vehicle is difficult, but it mostly works."



10220 - VW Camper

HBM: The Winter series has become a classic. Is it difficult to fit the Christmas theme without touching on the religious part of the holiday?

JB: No. You can say this is good or bad, but it has been commercialised so much that from our starting point it is basically a fantasy village, a little utopian community. And in that sense, you can exaggerate a lot of features and pack in the snow and have a lot of fun with it without having to worry about really representing something important about the holiday. It is really just a cute fun town with some playful characters. Add in a light brick and throw in a few decorative

features, capture some of those things about going away for a holiday... A lot of it is about the preparation, like going to the post office to send your packages and there are only a few occasions like Santa's Workshop where we explicitly went with Santa and even that is not religious. So I think that we haven't found it to be an issue, and if we did start to go more into a religious direction I would start to have more difficulty trying to think of how to express that in a fun and playful way. So it's better to step away from that and just treat it as a commercialised holiday.



10245 - Santa's workshop

HBM: Why do most Winter sets have a classic ambience (vintage cars, horse cars...)?

JB: I think it is just that 'old world'. There are a lot of paintings and stuff you see that throw you back to another time. And I think the holidays are such a weird contradiction where you are going home to a reality, to a family, and something very real, and for many people that's the reason they want to escape. They need to get away, it is too real. So I think it is nice that we can offer them that little dream village in the corner when you have the chaos and the noise and all the people, so you can have your moments in that utopian little place where you can't hear so much of the noise. You just hear the snow falling. I think there's something nice about the horses and some of the older vehicles. You were never there, so you can only imagine the best of it.

HBM: About the Architectural buildings, how do you establish the size of the buildings you are reproducing?

JB: That is usually based on a key feature. For something like Big Ben, we had to do the clock face and that scaled the whole tower and everything else. For something like the Sydney Opera House, it was just those shells. We literally had tried that so many times and gave up and finally came up with that one combination which we knew was scalable, but we knew that at its smallest size it had to be this big, and then everything scaled off of that. I think it is usually one item. Also with our cars. It is usually the one detail, the fender or the wheel, the windscreen. Sometimes there is a defining feature; we will build that and then everything else comes from there.

HBM: Do you visit the building personally? Or do you base the model on blueprints?

JB: We don't often visit things. A lot of it comes down to time. We don't have a lot of time to be travelling everywhere and exploring these things. Areas like London are easier; We are there more often for something else and then we will stop

by and take pictures of Big Ben knowing it is something we would like to do. But otherwise it is online and even things like blueprints are harder to get now more than ever because a lot of the buildings we want to do are very famous or known and then with today's environment of a lot of those materials have been pulled off the internet and they are trying to protect it and so for security reasons we aren't given as much access as we could have found years ago. But on the flip side, the internet is a wonderful place and you can get enough images now. It is almost like you are offsetting the factual blueprints with enough reference images that you can almost see if somebody left a toothbrush on a window sill in one of those buildings. It is in one of those photos somewhere. So we depend quite a bit on photos.

HBM: Was the Fairground Mixer a test to see how well the amusement park theme would work?

JB: That was more me just wanting to do something I have always wanted to do. For years I wanted to do the Fairground theme. That's why I got hired into the company and it is a passion of mine. And I finally had a manager who was open to the idea and asked "What are you talking about? What can you do?". Then I thought if I'm going to do it I want to show what I perceived as one of the harder, cooler things to do, which is packing something on a truck. Looking back at it I wouldn't necessarily do it the same today, but it was just fun for me to do something like that. And then they got excited and were like "wow, you can do that" and they had nothing else to look at so it seemed cool at the time. But we have found now, since then, that a Ferris wheel is much easier for people to understand, a carousel, a rollercoaster... You don't have to say much, everybody knows it and understands it. You say a mixer, and you get "what's that?" And then people look at it and some of them ask "so what does it do?" And once it comes alive they love it, but it was a corky product, I have to admit, though it got us started so I can't complain. It served us well. But it is a little bit of a special one.

HBM: Is it difficult to add the functions of movement without making a model that is too "Technic"?

JB: Yes. There is actually a great point in that. As much as I love the fairground and I love movement and I love MINDSTORMS and I love Technic (I buy a lot of Technic models) I like the challenge of not overusing Technic or falling back on Technic as a crutch to help do something. When you look at something like the roller coaster, very early on we were looking at whether we should just make a Technic frame that can support everything. In many ways it would have been a lot easier and would be very strong, but it is a very technical solution and as a building experience you are constantly building everything sideways and never quite stacking. It is a different building experience. And I think when people are buying a Creator Expert product I think they have an expectation of fun building techniques, and a degree of building that is not just snapping Technic beams together. I think we have a fine balance. We try to use it where we need to, and otherwise try to pull it back and ask "can we solve this in another way, in a System way?" We can argue whether we are at the right level now. I am not sure. But I think it is at least a fun challenge to see if things can be built with more standardised bricks. I would prefer that.

HBM: This year you have launched the much-demanded roller coaster. Was it difficult to get smooth movement of the wagons along the roller coaster? Is there much engineering behind this design?

JB: Yes. This whole thing is difficult. By the way, Robert is the designer of this and he could speak a bit more about it, but what I can say is that it was a collaborative effort. We had Mike Psiaki working on it, Carl Merriam... I worked on it for a bit, Robert worked on it the most. And then we had an entire engineering team behind it, because the strange thing about this product is that it's one of the few products we have ever made where we were making the product as we were also designing the system that supports the product. While they were designing Boost, which is going to connect into it and upgrade it, things were changing along the development process and we had to adapt. It was give-and-take work. They changed some of the track pieces because of our roller coaster but we also changed our roller coaster because of some changes they had to make to the different parts. It was an extremely organic process with a lot of back and forth, but the chain especially was just for us. It came very close to just being taken out as an option because it was quite difficult to come up with a solution to make the cars catch the chain consistently. You could argue that we did our best. The chain has to be fairly tight for it to work so some people who are getting this may find that it doesn't always catch and they just need to take out a chain link or two, tighten it and it should then have better performance. But the challenge is that because of the weight it wants to pull back and then it lifts off the chain and if you don't have three cars, the first one will pull back, the second one will pull forward and you need the third one to level them out. It took a bit of effort simply to understand what was needed to make this work. And then there is the structure. Just being able to lift it, to come up with a frame that is sturdy enough for the average person to lift it... but if you and I are carrying it together we should be able to lift it from both ends. That requires two different ways of supporting it, and that was a huge challenge. That caused us to add the wheels on the top, because initially the model was even longer and there was another hill to get around the first hill so you didn't need the tires. But then we decided it was getting really long and we had to compromise and add the tires, which isn't really bad, because tires are associated with fairground rides. That is how they do stop and start many things. So, we were still authentic enough, but it took a lot of back and forth and compromise. I think it is wonderful that we have this option, because the adults who use it will make it work. They will find a way. But the kids don't need that, which is why you will see the pirate roller coaster. They will just move it up themselves because it is more intuitive, it makes sense for them. But I like that they decided to make a system that is for everyone. It is easy enough for young kids to use. They can just snap it on and off and push it around. But then if you really want to you could make a roller coaster that could fill this room, and that is kind of awesome.

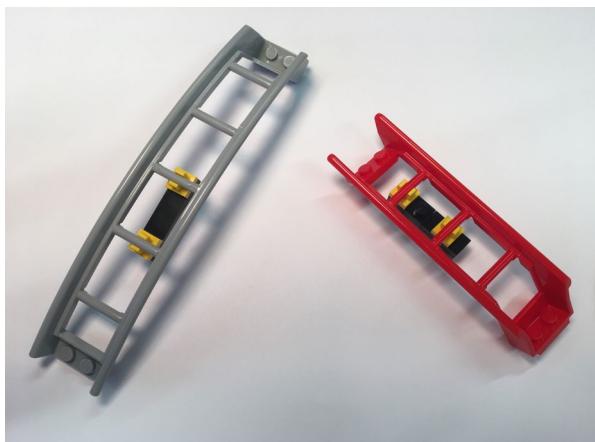
HBM: Where those new parts of the roller coaster requested by your department or were they requested by another department and you took advantage of their availability?

JB: I am fortunate that my background in the company allows me to represent design in some areas. We wanted to come up with a new big moment, a new "wow" system, to launch to the world. We had many options but we ended up with the roller coaster track, because you could use this structurally, for cranes or for staging and all kinds of things. They wanted something versatile and flexible. I was part of the process of helping find the "wow". Once it was decided, I was one of the people that got to represent design when our engineers, and what we call the design lab, was trying to figure out this system. Because the geometry of this is fascinating. Trying to make it fit into the LEGO® grid, but then function as best we can as a roller coaster. We explored twisting flexible tracks,

we had curves... We have this mapped out for other elements. There is a lot of potential in the system. We tried to figure out every aspect of the element. For example, what should be the spacing of these bars, given that an even spacing on a curve won't align with the vertical grid? Our solution was to make the direct distance between each rung a half-stud multiple, which allows for connection to clips on plates or jumpers within the grid. Some of the principle discussions like that were fascinating to work through. And then to decide how some of them needed to have this triangulation and in others we had to do it differently (add example pictures!!!) because we couldn't put the triangles on the upper ones as we needed space to pass the chain through. It was wonderfully complex to think through all the ways we wanted to use it. And then they ensured that it is mouldable etc. It's a fun process, but it involved a lot of people and a lot of back and forth.



Top rail has no triangles to allow chain pass through



Rails fit in the system

HBM: Within the singular models, we talk about collaborations with MAERSK, the Horizon Express or the Sopwith Camel. Perhaps the most acclaimed by AFOLs are the trains. When you think of a new train, what parameters do you have in mind?

JB: When we were doing the trains more regularly we wanted to make sure that the first one was the steam train to show off the power functions. We had the XL motor and we had just got rid of 9V trains and people were upset, so we wanted to really give them something interesting that was for adults that showed the potential of the new Power Functions. It also meant we wanted to do big train wheels, which is something the train fans wanted, and we kind of hit both of them at once: support the new Power Functions and also introduce big train wheels.

Then we asked what can we do that is quite different from this, and that would be a high-speed passenger train. So again, it is trying to throw your net broadly to show very different expressions. If you have a steam train and a very fast passenger train, what is in the middle? Well, you've got a MAERSK train, which is for cargo which covers the other one for trains. I think the decision making became quite easy as far as type of train is concerned. Then once you decide on the type of train which specific one? You could ask why we didn't do the Shinkansen (Japanese high-speed train), and a lot of that came down to our own aesthetic choice and interest... Something like the Horizon Express reminds me of the 1980s train which when I grew up I thought was amazing. I look at it today and I smile, because it is quite simple. And yet the impact it had on me as a child is still there, so I thought maybe we could have that as a starting point. How could we update that train and give shape to it with the new curves and other elements. I don't think I had as much exposure to the Shinkansen to even think about it. (Since then I have been to Japan and now it is all about the Shinkansen.) It is also about making sure that it has a global presence, that people know it enough and some of that was a little more subjective in the earlier days. We would have a little bit of a sense of what we thought just asking people around us what they know. Now we are more likely to have a lot more data, and we have analytics to know where people know stuff and why, so that when we make decisions we don't just guess but are a little bit more knowledgeable.

HBM: Can you design new pieces that are necessary for a model?

JB: Yes. Not often and not many, but something like the VW Beetle with the new $\frac{1}{4}$ curved bow. Since we don't do many elements we try to make it as versatile as possible. We used



10233 - Horizon Express

it in the Beetle, then on the bus, and other people have been using it elsewhere. We try to make new parts really generic so we can use them more. Then we also had the Ferrari windscreens which later we got to use in a Creator car. We are always trying to make sure that other people can use them. But it is not often that we get to design new elements, and it is almost always for cars because the partner, again being very specific, will say "these need to have our rim" or windscreens or something else and then we LEGOise it as best we can.

HBM: What theme would you like to do within the series that you have not yet done?

JB: That's a tough one because if I can imagine it we can do it. But if say it, then it is harder to do because people will know I just said it. So I will have to tease you a bit on that one and say I am an optimist and I'd rather keep some of these things to myself so that they can happen, and so I'd rather not mention it.

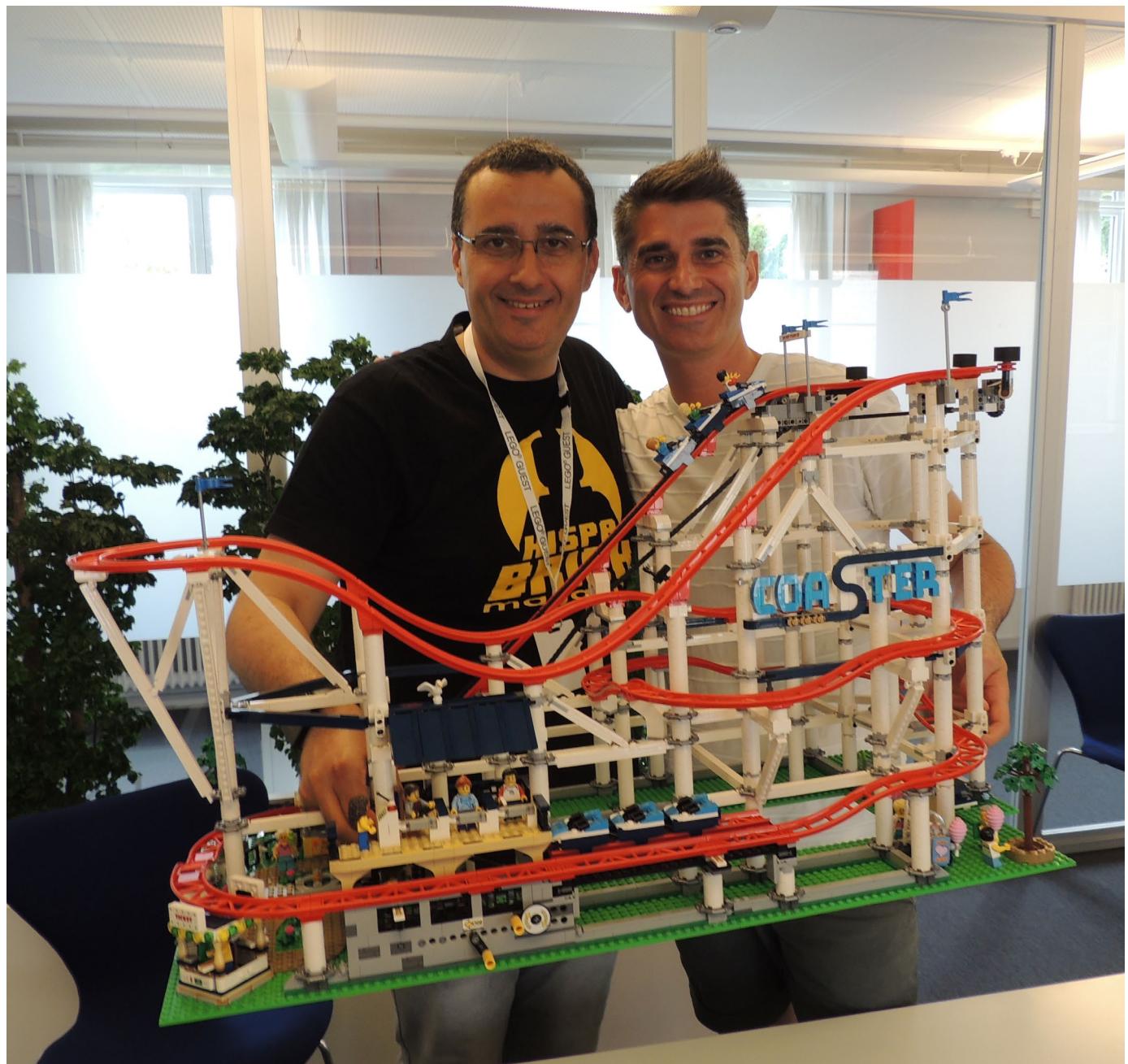
HBM: Each time the CREATOR EXPERT models get bigger. Where is the limit?

JB: The roller coaster proved we can do large models that people want, and so far people have expressed some interest in it. I think I am not as averse to the size constraint. I am more thinking about whether it is enough of a theme that people will be excited about. There are only so many things that are that big. And then to find the ones that connect with a lot of people, that is the challenge.

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[1] Angular Brick 1x1, named by the LEGO® Designer Erling Dideriksen, also known as the headlight brick

[2] See our interview with Carl Merriam in HBM028



Jamie Berard and our redactor Lluís Gibert

Bring back monorail?

by HispaBrick Magazine®

Images by Masao Hidaka



Masao Hidaka - Japan

Over the last 10 years and more, we have heard thousands of requests for bringing back the monorail. We all know that this is not something LEGO® currently has in its plans, basically because the monorail was not what we could call a success in the early 90s.

Our fellow AFOL Masao Hidaka (from Japan) decided to build a monorail with standard parts and using Power Functions. The tracks are built with bricks and tiles, taking advantage of the small gap between bricks that allows one to make curved shapes.

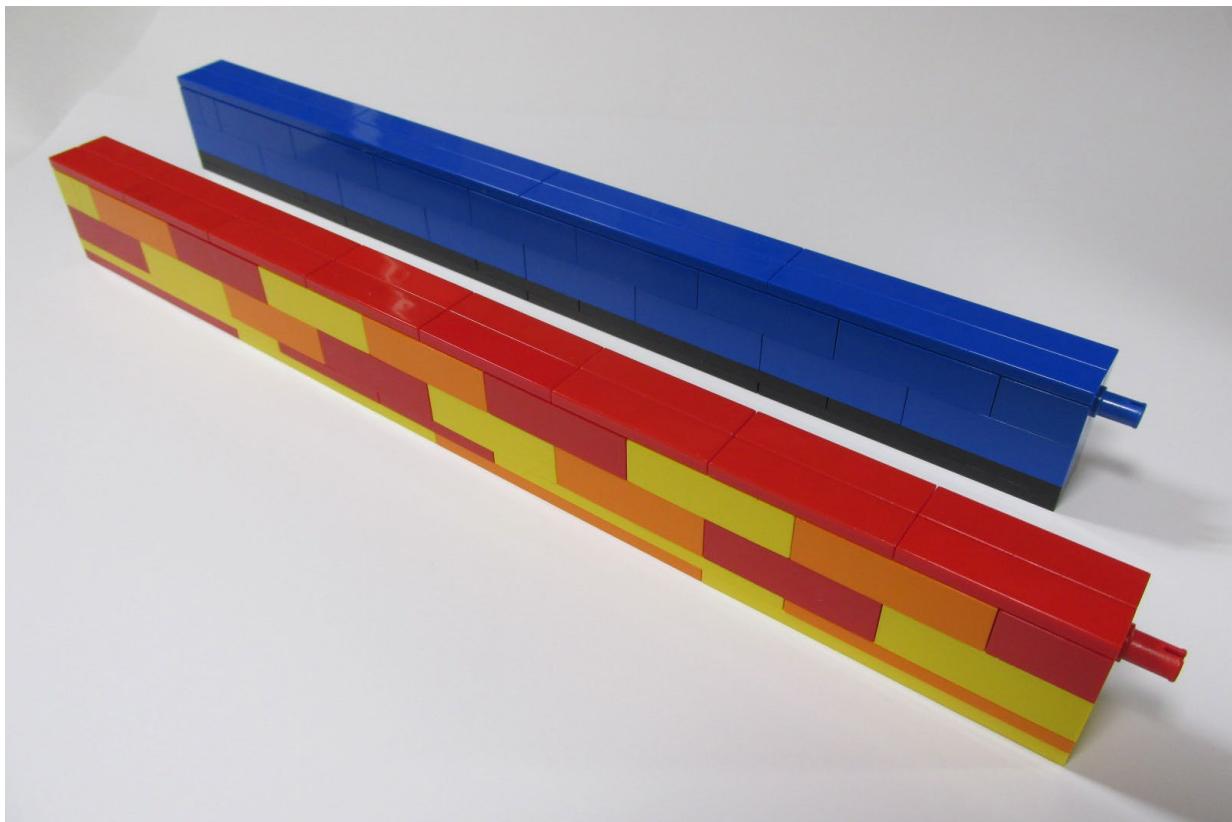
The results are more than acceptable, and several fans from other parts of the world have also used Hidaka-san's system to build monorails. Now it's time to get to know Hidaka-san and his system.

HispaBrick Magazine®: What inspired you to build a monorail?

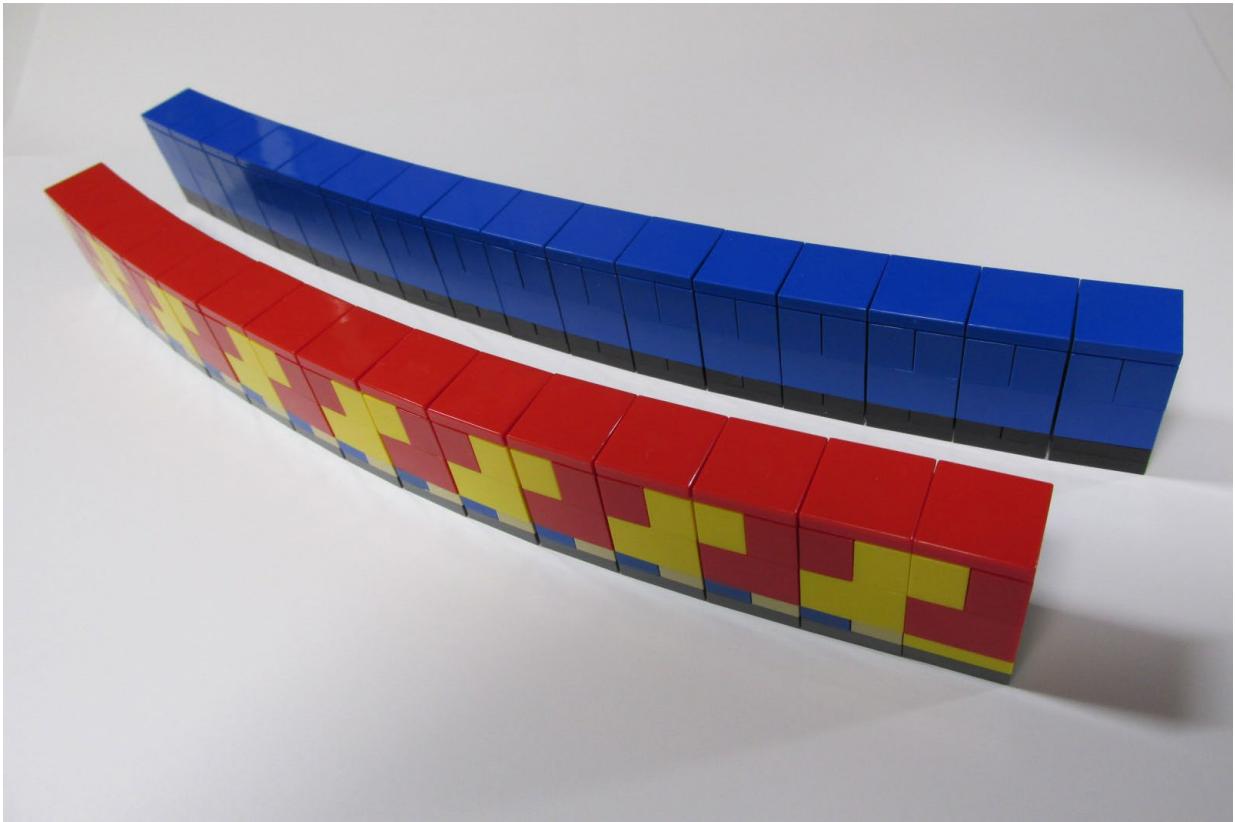
Masao Hidaka: In my childhood, I could not see the real monorail. This was the dream vehicle for me. Since becoming an adult I still remember it, so I have tried to make the monorail with LEGO®.

HBM: How are the tracks built?

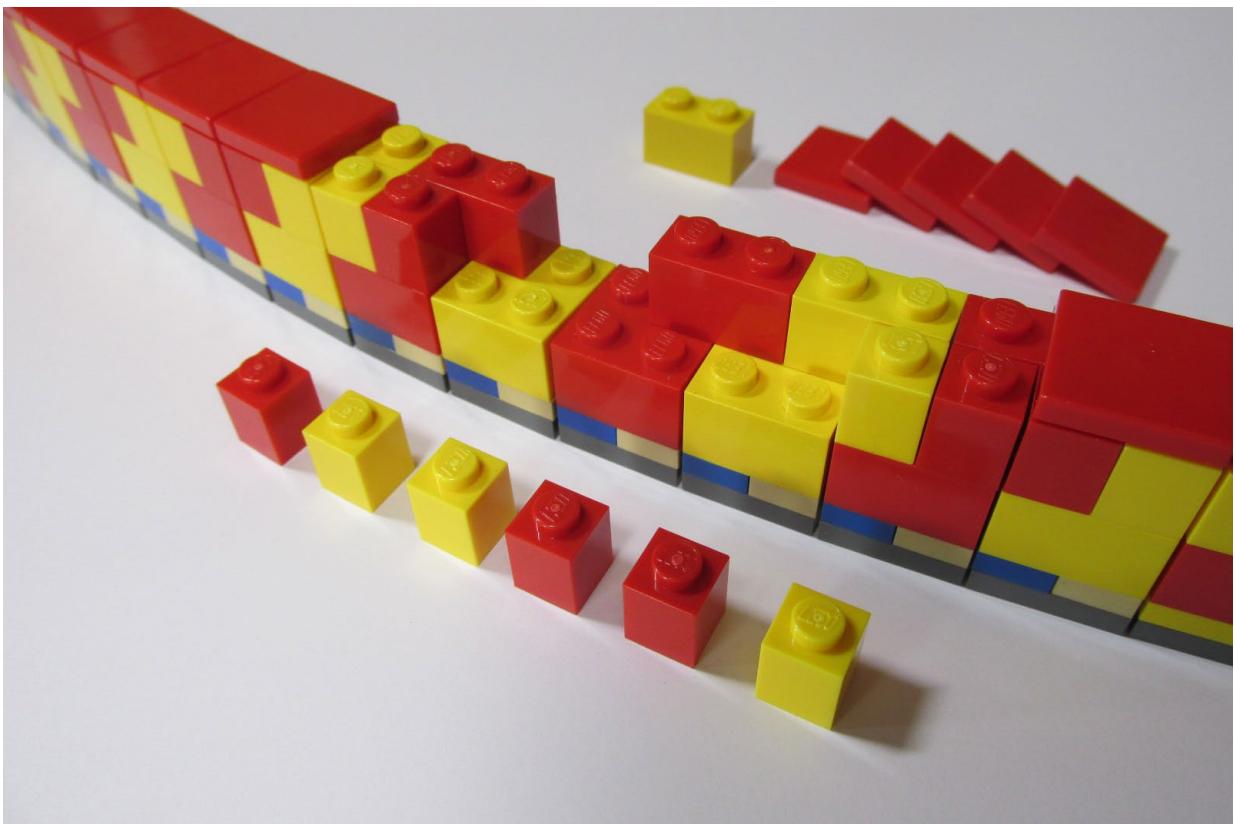
MH: We can build the monorail rails with basic LEGO® bricks, without special parts. The rails are easy to build and there is no limit to the possibilities of the layout. Some people say that the curves we use are "stressing the bricks". I think so, and it is true. But I believe that the way we build the curves is one of the solutions to make them. It is easy to point out the faults in our monorail, but we achieved a very realistic monorail using basic LEGO® bricks. I think the objective of building the rails with "basic LEGO® bricks" is very important.



Straight rails. The coloured one shows how to build the rail.



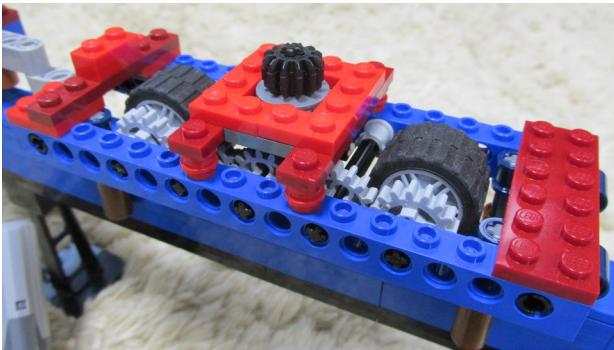
Curved rails. The coloured one shows how to build the rail.



Inside view of a curved rail.

HBM: How does your system work?

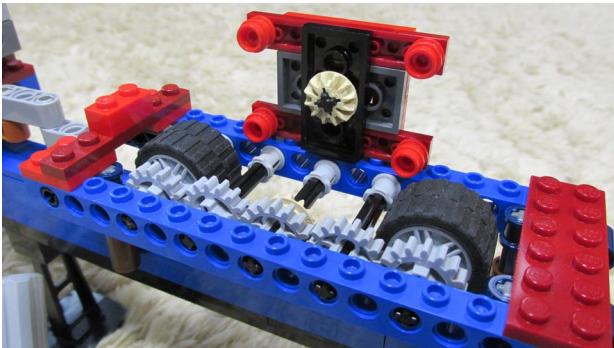
MH: I use the Power Function system, and two motors for the monorail. Both the first car and the third have a motor, while the second car has the battery and receiver unit. The motor drives the racing tires from LEGO® City series. The structure is very simple, clamping the rail with the guide from both sides. And I then use the Power Function system for switching rails. I made them by modeling the real thing.



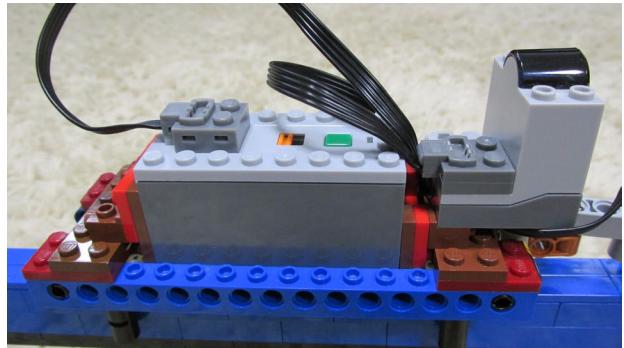
View of the traction car



Traction and battery car assembled



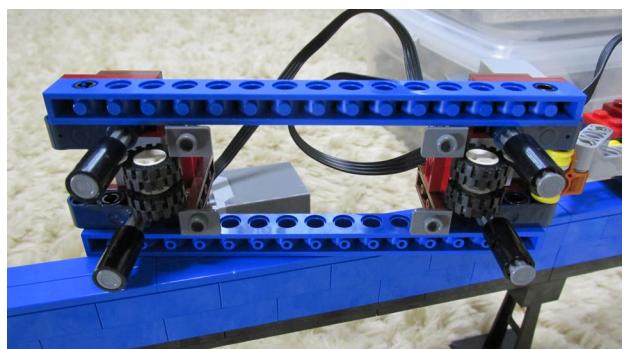
Assembly view of the traction car



Top view of the battery car



Bottom view of the traction car



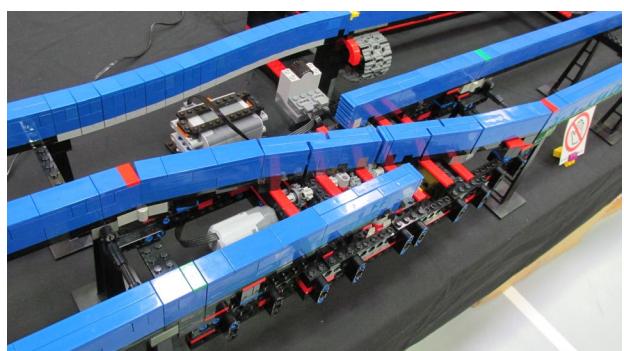
Bottom view of the battery car

HBM: Was it very challenging to develop the motorized switches?

MH: It was difficult to make them. I think they would be easy to make without limits on size, but I wanted to make them compact. I used a repeated trial and error method to design them.



Switch - Position 1



Switch - Position 2

HBM: What do you think of the new Powered Up platform? Is it compatible with your designs?

MH: In the new Powered Up platform, two motors cannot be connected. It is currently difficult to use this for the monorail. But switching rails is OK. In the Power Function system we can use four channels and 8 motors. So I use three channels and 6 motors for switching rails. But this is the limit. In the Powered Up system I can increase them.

HBM: Is there anything you haven't been able to build yet for your monorail system?

MH: I think there are a lot of things to do. I have to improve the structure of the monorail and rail-switching. Also, I have already made Tokyo Monorail, Osaka Monorail and Yui Rail, but there are many other monorails in the world. And then I'd like to make a town with this monorail. Anyway, I look forward to making more monorails in the future.

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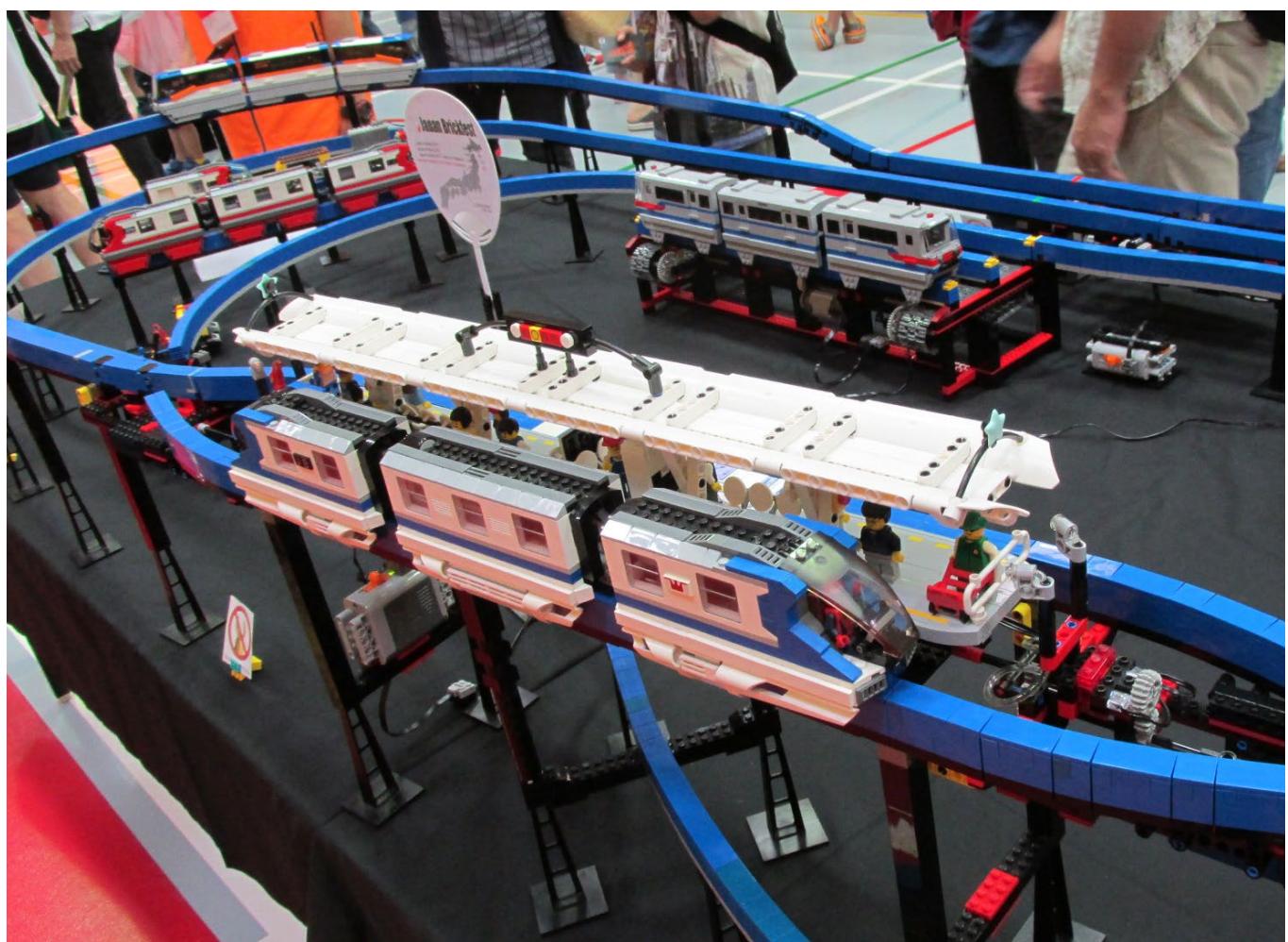
Masao Hidaka's monorail at Japan Brickfest 2018. Note that the system allow to add messages to the rails.



Layout at Japan Brickfest 2018.



Different monorails from different Japanese cities.



Monorail stopped at the station

LEGOLAND Japan

Text by lluisgib

Images by lluisgib and Delia Balsells



As an AFOL, it is always an interesting experience to visit a LEGOLAND park. In the past I have visited LEGOLAND Billund (HispaBrick Magazine® 007) and the one in Günzburg (HispaBrick Magazine® 010). In 2017, LEGOLAND in Nagoya was opened, and since I spent my summer vacation in the country of the rising sun, I had to take the opportunity to visit the new amusement park (even it were during a typhoon...)

No doubt one of the main attractions for every AFOL is the miniland (a LEGOLAND scale reproduction of the most characteristic monuments and cities of the country where the LEGOLAND is located). With the experience of the LEGOLAND Discovery Center in Tokyo (HispaBrick Magazine® 020) and the one in Osaka (HispaBrick Magazine® 024) my expectations were quite high.

I have to admit that the miniland didn't let me down. Perhaps it was due to the fact that I recognized most of the elements shown, or because of my well-known passion for Japanese culture. Whatever it was, it's a great miniland – smaller than the ones in Denmark or Germany, but with a higher level of detail, maybe because the park is newer and the builders have more references to take into consideration.

You follow a route through the miniland where, among others, the most well-known places in Tokyo can be seen (Shibuya Cross, Ginza, Tokyo Tower, Sky Tree, Tokyo Station, Asakusa Temple), places in Kyoto (Kinkaku-ji Temple, Fushimi-Inari Temple, Kiyomizu-dera Temple), places in Osaka (Dotonbori, Osaka Castle, Umeda Building), places in Hiroshima (Miyajima Temple), places in Sapporo or the city that hosts the LEGOLAND, Nagoya, with its castle, or the Baseball stadium (this one in minifig scale).

Between rain showers, the sun appeared and we could take some better pictures which we have included in this article. As in any miniland, the pictures do not really do justice to what can be seen in person. However, you can still get an idea of what this miniland is like in terms of architecture and showing a way of life that is totally different from what we are used to in the West.

The rest of the park is quite similar to other LEGOLAND parks. It is true that, unlike the oldest ones, there are some large-sized minifigures and vehicles made with molds instead of bricks. They represent current sets, like a motorcycle or the limousine from the Palace Cinema modular building. Maybe I'm not purist enough about this aspect, but I loved them and I almost bought an extra plane ticket to adopt one ;). There are also sculptures made with bricks: fountains, animals, and other decorations.

There are some common rides that are similar to those in other parks, such as the 4D Cinema – where you can see a movie made with the characters from the LEGO® Movie – the Fire Station, or the LEGO® Factory, where the manufacturing process of the brick is shown, and afterwards you can take home a brick molded there, with an exclusive decoration.

Other rides, the roller coaster for example, were surprising, as it was a mixture of two rides from other parks. At the beginning, you go through a cave where there are a lot of models decorated in the Castle theme. Later, after the cave, the wagons start going faster and you get into the roller coaster, which is outside. Sadly, since it was a roller coaster we couldn't use the camera. There's also an area dedicated to Ancient Egypt, another to Arctic exploration, with an aquarium containing penguins... and even a DUPLO area for kids!

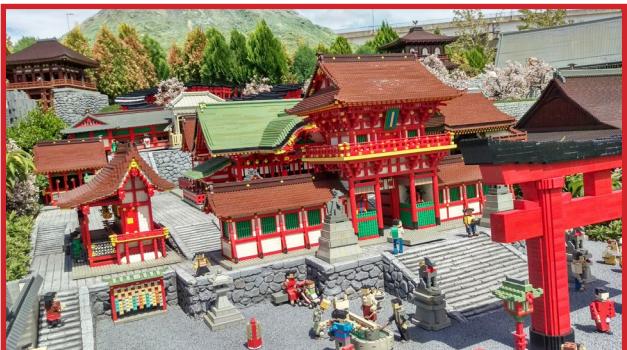
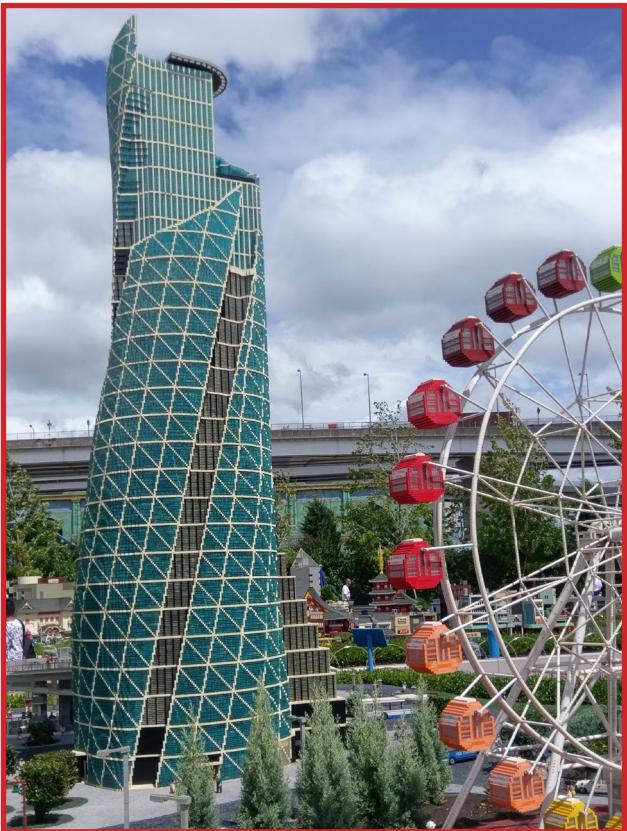
If you are in the Nagoya area, don't miss out on the opportunity to visit this LEGOLAND park. You will get to know Japan better thanks to the miniland, and you will enjoy interesting rides and amazing decorations.

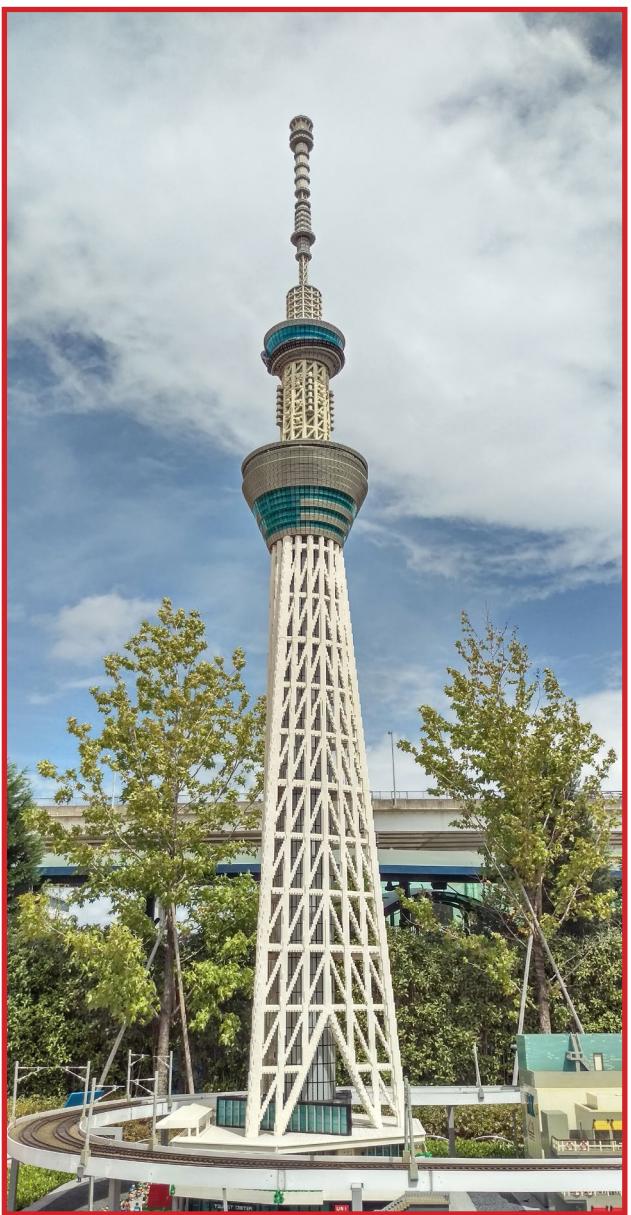
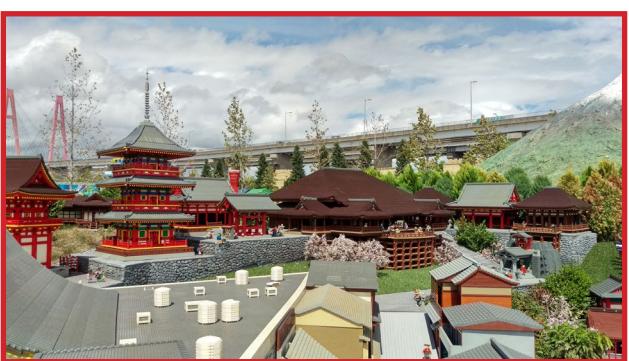
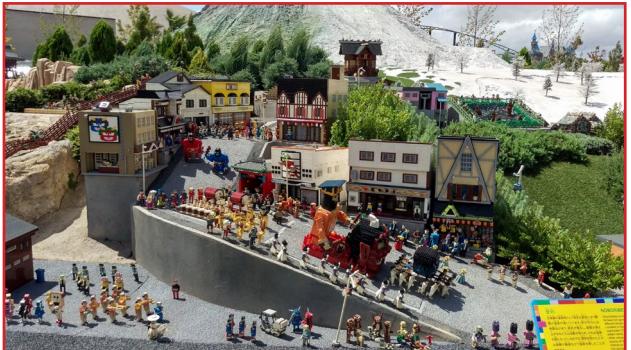
PS: In case of typhoon, near the LEGOLAND park there's the interesting Railroad Museum 'Nagoya Maglev Museum' where we took refuge when the weather worsened ;D.

I want to thank Itsuka Oguri for allowing us access to LEGOLAND to produce this article.

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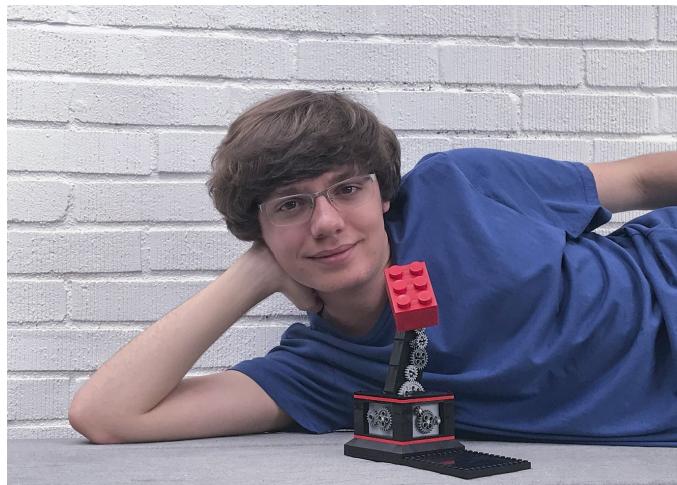




Meet the Winner of the 2018 LEGO® Ideas Trophy Design Contest

By Sanjay Seshan and Arvind Seshan

EV3Lessons.com and FLLTutorials.com



Quinten, *nasa105*

Quinten, also known as Nasa105, is a teenage LEGO® designer from Pittsburgh, Pennsylvania. He started building with LEGO® bricks when he was four or five years old. He loves building with LEGO®, but also enjoys hanging out with friends, the comics page, old TV sitcoms, trying new foods, repeating funny movie lines with his brother, and the sport of trapshooting.



Earl, the African Gray Parrot



Yello Hot Rod

Quinten has entered LEGO® contests for years. Many times, he came close to winning. For example, his African Gray Parrot model, Earl, was mentioned on the LEGO® Creator blog and hangs in the Pittsburgh Aviary. His Yello Hot Rod was used on the LEGO® Creator website. However, in the spring of 2018, Quinten was named the winner of the LEGO® Ideas Trophy Design Contest with his entry called The 2X3. On August 1st, we invited Quinten to come to a FIRST LEGO® League kickoff event so he could see the contest that he had designed the trophy for.

How did you come up with your trophy design?



Meeting Quinten at the FIRST LEGO® League kickoff

A few months before the contest I saw some cool trophies that some other LEGO® fans had made, and I thought to myself "Hey, it would be cool to make a trophy sometime. I keep entering contests and not quite winning, but I've put in loads of work and my skills are getting better, maybe I should build a trophy for myself to remind myself to keep trying, keep going, and keep building." So, I had some ideas bouncing around in my head for a couple months. Then the LEGO® Ideas contest came along! It was a great opportunity for me to get the idea out of my head. Getting ideas out of your mind and building for real frees up room for a lot of new ideas. Oh, and I first heard about the contest in the last 10 days, so I had to hurry!

What does your trophy represent and how did the various elements in your design achieve this goal?

To me this trophy tells me to keep trying. I entered a lot of LEGO.com contests and lost every single one, but I didn't let that stop me. If you don't win a contest, that doesn't mean your building is bad, it just means you have to keep trying and persevere onward. I was building The 2x3 for myself, to tell myself to just keep building. Win or not, The 2x3 was going to be there to tell me to always keep trying. I hope The 2x3 will now go on to represent that for participants in FIRST LEGO® League.

The trophy also represents creativity (the red color) and engineering (the grey gears). I love LEGO® kinetic sculptures and models that have functions and elegance combined together, and I really wanted to capture the spirit of those designs in my trophy. I believe there is an art and beauty in technology and I wanted the trophy to show that in a sculptural way. I wanted it to feel good in my hands, to have a solid feel. And I wanted the trophy to be something iconic to look at even years from now; what's more iconic than a classic LEGO® brick?

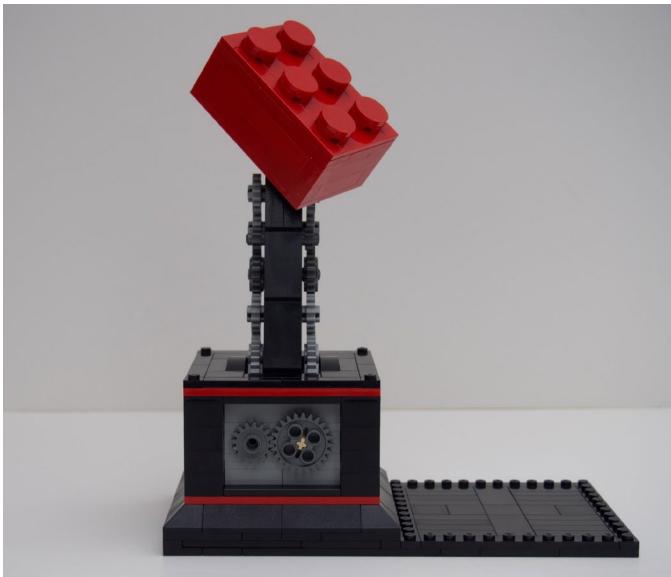


The 2x3 Front View

Did you go through a lot of designs?

For this contest, I had a pretty good idea of what I wanted to enter, but there have been other contests where I've had almost a dozen ideas. The idea and the design of The 2x3 formed quickly, but it didn't come from nowhere. I had years of build-up and practice with LEGO® before the contest, so when the time came, I was ready.

There were only 10 days left for me to build my trophy and enter, so I didn't have much time to go through many iterations. At the beginning I did some testing in LEGO® Digital Designer to get through first iterations for the base that would have taken longer in physical building. I knew I wanted this to be a physical build so LDD was a great tool to speed that process up. Then I didn't waste time digging for LEGO® bricks (still working on sorting my collection!).



The 2x3 Side View

What was the most challenging part of creating your trophy?

I had a general idea for the shape of the trophy from the base all the way to the brick, but I couldn't quite visualize it when it came to the gears. I had to play around with the gears a bit and test different combinations to see what looked better. It took me a while to mesh the gears on the column while still maintaining the organic climbing effect, but in the end, it was worth it. I also realized early on that the gear panels would require some fiddling similar to the column, so when I was building the base I made each panel modular. This really saved time in the design process.

LEGO® Worlds was pivotal in the final design of my trophy. There's no custom SNOT building or Technic available in LEGO® Worlds, only straight up-and-down building with LEGO® System bricks. This gave me the opportunity to practice my non-SNOT building skills and really see the power in regular LEGO® bricks again. Before, I sometimes used

SNOT building as a crutch rather than a design element, but now I can better distinguish the correct times to use it. Some people have complained about the limitations of LEGO® Worlds, but those limitations made me more resourceful. If you really want to improve your regular LEGO® System building, LEGO® Worlds is a great tool for that.

What other LEGO® creations are you especially proud of?

Whether it's a model I build for a contest, a model I build with friends and family, or a model that I build by myself, I learn something new from it. Each new technique I learn goes on to improve the next model, so they're all very special to me because of the different things I learned from each one. Learning new things from previous designs enables us to create better things in the future. They are all good friends, it's impossible to determine which friend is most special.

Here's one model that specifically influenced my trophy. This is Holly Jolly Conifers, an entire Christmas Tree Farm built in LEGO® Worlds. I absolutely LOVE Christmas, so last year I wanted to make something in LEGO® Worlds that really captured the Christmas spirit. Plus, there was a LEGO® Worlds Winter Wonderland contest going on LEGO®.com, so I figured I'd give it a shot! Holly Jolly Conifers did not win the contest though, and that was a bit discouraging. It felt like just another failed attempt. However, that discouragement went on to fuel The 2x3 in a great way. I realized that I still learned much about lighting and new design techniques while building Holly Jolly Conifers, and while it's still nice to win every now and then, learning new things to improve the next model is most important.



Holly Jolly Conifers

Do you have recommendations for others who want to enter LEGO® design contests?

Feedback is important in any model you make. It's best to find people who you trust to give you good constructive criticism, they can help you notice a problem you may not have noticed otherwise. I always like to ask my family for feedback. You need feedback people that know you and how you design because then they will know when to tell you to push harder, try one more time, or even pull back a little. My feedback people are really important to my builds.

What happens after you win a LEGO® IDEAS contest?

I was surprised at how much there is to do after winning; emails, meetings, design discussion, some physical building, and interviews like this one, but it's also a really amazing experience meeting people from all over the LEGO® community. It's so cool seeing first-hand how LEGO® works and designs their models, and I'm impressed by how much they care about the quality of every build. Although, I think the best part is getting to work with a LEGO® designer. It's like walking into Willy Wonka's Chocolate Factory!

I want to say thank you to LEGO® Ideas, LEGO® Education, the FLL, and LEGO® in general for being so kind and welcoming. I'd also like to say thank you to everyone in the TT Games Development Team for creating LEGO® Worlds, The 2x3 would not have been the same without it. And I want to give a big thank you to the Seshan Brothers for offering me this great interview!

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Tutorials



Creating Custom Blocks with The Creative Toolbox

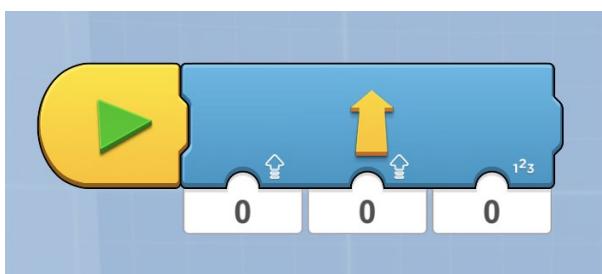
By Sanjay Seshan & Arvind Seshan

About the Authors

Sanjay and Arvind, or the Seshan Brothers, are well-known in the LEGO® robotics community. They are the founders of EV3Lessons.com, a highly popular site to learn to program with MINDSTORMS, and they are also the winners of the prestigious FIRST LEGO® League World Festival Champion's Award. They love to play with all LEGO® robotics platforms, and enjoy teaching programming and sharing their creations with others.

Introduction

LEGO® Boost has a great many possibilities for coding. You can start with the built-in models and their programs. However, the Creative Canvas section of the App allows you to explore further and make highly sophisticated programs.



Lesson Objective

Boost lets you learn many programming concepts while having fun with the built-in models. In this lesson, you use Vernie to explore additional coding concepts. You will program Vernie to move a particular distance of your choice that you will measure in centimeters. You will create a custom block for Vernie that will allow you to enter both the speed and distance that you want Vernie to move. You will be programming using the Creative Canvas area of the App.

Robot Design

Follow the building instructions in the Boost App to construct Vernie. No modifications will need to be made. However, you will need a centimeter ruler or meter stick for the next part of the tutorial.



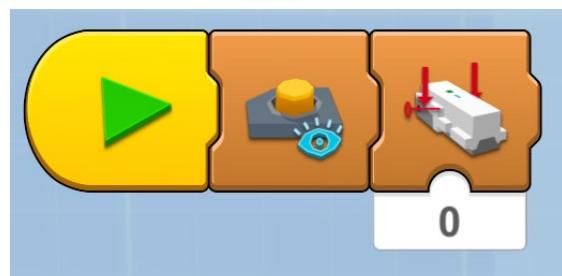
Converting Centimeters to Motor Degrees

The first step in creating the custom block is to calculate how many motor degrees Vernie moves for every centimeter. Place Vernie along a meter stick or centimeter ruler on the floor.

Step 1: Drag in a Start Block

Drag in a *Button Widget Show Block* so that the button will be shown to the user

Drag in a *Set Motor Rotation Sensor Block* and set it to 0 to reset the rotation sensor



Step 2: Add a *Forever Loop* so the program will continuously display the rotation sensor



Step 3: Add an *If/Else Switch* inside the Loop

Add a *Button Widget Reporter* to the Switch statement



Step 4: Add a *Stop All Sequences* to the True statement of the Switch so that the program will end when the button is pressed

Add a *Display Widget Show Block* to the False statement of the Switch and a *Drivebase Position Reporter Block* under the Display Widget Show Block in the False statement so that the rotation sensor data is displayed when the button is not pressed



Step 5: Measure the Degrees

Run the program you created. Now, move Vernie manually along the ruler for as much distance as you want (e.g. 30 cm).

Place your hands firmly on the treads and move them forward to get a correct measurement.



Watch the display on your screen. You will see the number of degrees displayed.

Step 6: Degrees per cm. Calculation

Take the number of degrees displayed on the screen and divide by 30 centimeters to get the number of degrees Vernie moves for each centimeter. Write down this value.

You will use this calculation later in Step 6 of the Programming Steps section of this tutorial below.

Programming Steps

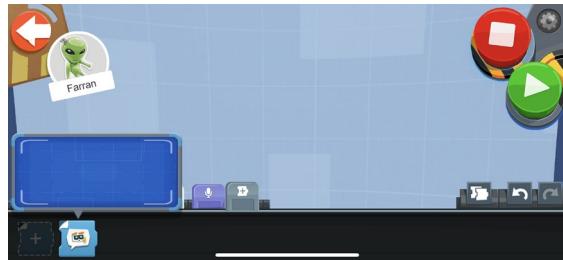
Go to the Creative Canvas Area of the Boost App.

Step 1: Starting a Custom Block

Click on the Grey Custom Block pallet.

Click on the plus sign to create a new block.

Click on the Dark Blue rectangle to go inside the custom block



Step 2: Customizing the Icon

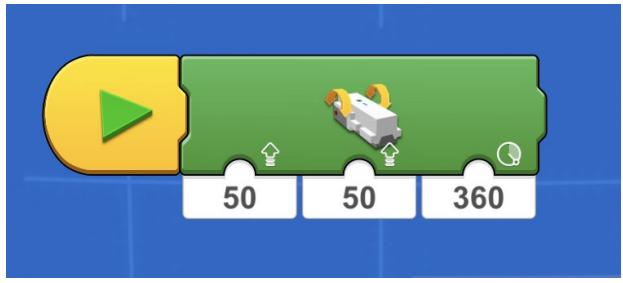
Click on the auto-generated icon to change it. Select the yellow forward arrow.



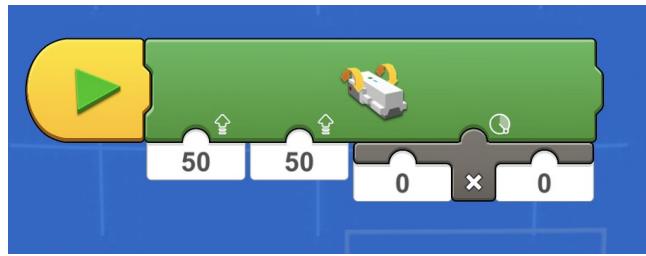
Step 3: Creating the Custom Block

Drag in a *Start Block* from the Yellow Palette

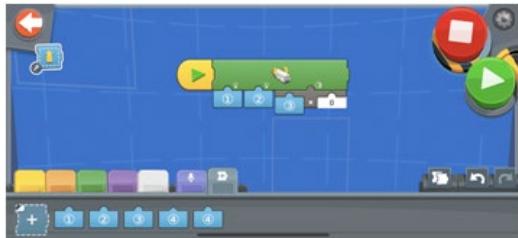
Drag in a *Drivebase Move Tank for Distance Block*



Step 4: From the *White Math Pallet*, select the *Multiply Operator*. Drag this into the last parameter in the *Move Tank for Distance Block*.



Step 5: Go back to the Custom Blocks Grey Pallet and drag in three variables. Variables 1 and 2 are for the speed of Motors A and B. Variable 3 will be for the number of centimeters.



Step 6: Enter the number of degrees that Vernie moves per centimeter in the last remaining parameter.

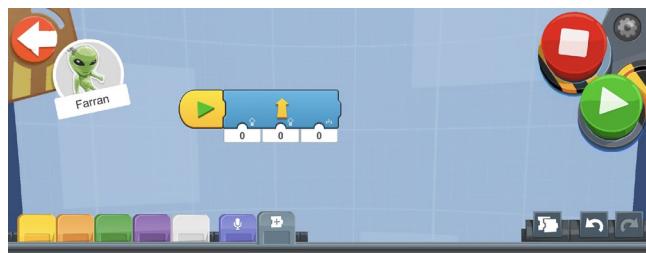
You calculated this in the **Converting Centimeters to Motor Degrees** section above.



Step 7: Hit the back arrow to exit the custom block.

Step 8: Now you are ready to program Vernie to move a particular number of centimeters and at a particular speed.

You can find your new block with the Yellow Arrow icon in the Grey Custom Blocks Pallet. Use your new block to program Vernie to move at whatever speed you want and for whatever distance you want. (e.g. try '50' for Motor A and B Speeds and '30' for Distance and see what happens.



Programming the EV3 with Swift Playgrounds

Lesson 2 - Straight Move

By Ahmad Sahar

Hi, It's Shah again. For those who don't know, I'm a professional trainer specialising in MacOS and iOS software and hardware, and I also conduct classes on iOS App Development and LEGO® Mindstorms.

In the last lesson, we wrote a simple program to display text on the screen. In this lesson we're going to build a robot and make it move forwards and backwards.

What you need:

- An iPad with Swift Playgrounds installed
- LEGO® Mindstorms EV3 Education (set no. 45544) or Home (set no. 31313)

Before you begin

For this lesson you need to build either the Educator robot from the 45544 set or DrivingBas3 from the 31313 set.



The instructions for the Educator robot can be found here:
http://robotsquare.com/wp-content/uploads/2013/10/45544_educator.pdf

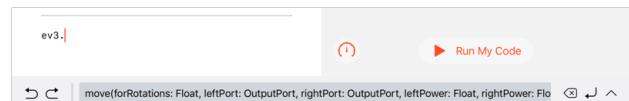
The instructions for DrivingBas3 can be found here:
<http://ev3lessons.com/RobotDesigns/instructions/DrivingBas3.pdf>

Make sure you have fresh batteries in your robot, your iPad is fully charged, and your iPad is paired to your robot.

Straight Move

You can use the template you used in the last lesson, or you can download a fresh copy. Remove all the code from the template, and connect to the EV3 brick.

Tap ev3 from the suggestions list. It appears on the page. Tap the dot in the suggestions list. Scroll through all the suggestions in the suggestions list until you see this one that begins with "move":



Tap it to insert into the page.

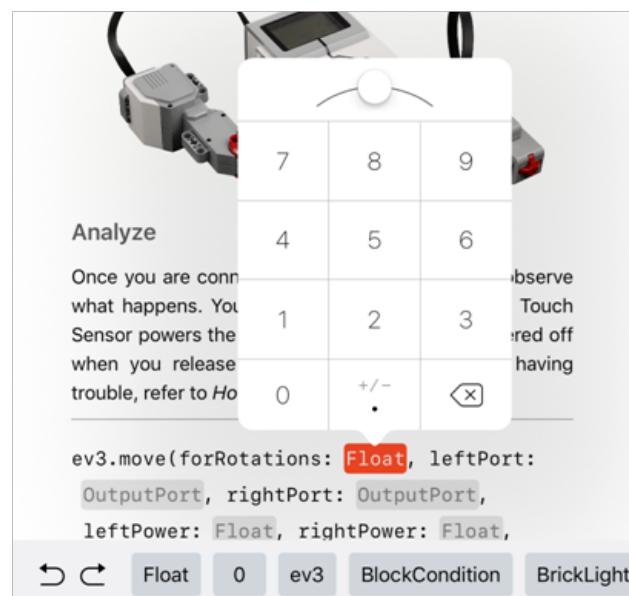
This is a Swift function which is similar to the EV3-G Move Tank block.

It has a number of parameters:

forRotations: Number of rotations to execute
leftPort: The port the left motor is connected to. Can be .a, .b, .c or .d
rightPort: The port the right motor is connected to. Can be .a, .b, .c or .d
leftPower: The power level specified for leftPort.
rightPower: The power level specified for rightPort.
brakeAtEnd: Brake or coast at the end of the move.

In general, to change the value for the parameters, tap a parameter, and you can either use a picker to enter the value, or choose from the suggestions list.

We'll start by changing the *forRotations* parameter. Tap the parameter, which is represented by the word *Float*. When the picker appears, choose 1. This sets the number of rotations to be executed to 1.



Tap the *leftPort* parameter, *OutputPort* and tap the dot on the suggestions list.

After you have done so, the motor ports a, b, c and d appear in the suggestions list. Choose b. This sets *leftPort* to Port B on the programmable brick.

Tap the *rightPort* parameter, *OutputPort* and tap the dot on the suggestions list. Choose c from the suggestions list. This sets *rightPort* to Port C on the brick.

Tap the *leftPower* parameter, *Float*. The picker appears. Enter 50. This sets the power level of the left motor to 50.

Tap the *rightPower* parameter, *Float*. The picker appears. Enter 50. This sets the power level of the right motor to 50.

Finally, tap the *brakeAtEnd* parameter, *Bool*. Tap true from the suggestions list.

The function should look like this at this point:

```
ev3.move(forRotations: 1, leftPort: .b,  
rightPort: .c, leftPower: 50, rightPower:  
50, brakeAtEnd: true)
```



```
ev3.move(forRotations: 1, leftPort: .b,  
rightPort: .c, leftPower: 50, rightPower:  
50, brakeAtEnd: true)  
ev3.waitFor(seconds: 1)  
ev3.move(forRotations: 1, leftPort: .b,  
rightPort: .c, leftPower: -50,  
rightPower: -50, brakeAtEnd: true)  
ev3.waitFor(seconds: 1)
```



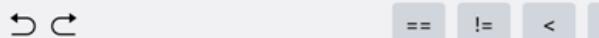
Next we're going to make the robot pause using a *waitFor* function.

Tap on the space below the code you've entered and choose ev3 from the suggestions list. Tap the dot, and scroll through the list of suggestions until you find *waitFor(seconds: Float)*. Tap it.

```
ev3.move(forRotations: 1, leftPort: .b,  
rightPort: .c, leftPower: 50, rightPower:  
50, brakeAtEnd: true)  
ev3.|
```



```
ev3.move(forRotations: 1, leftPort: .b,  
rightPort: .c, leftPower: 50, rightPower:  
50, brakeAtEnd: true)  
ev3.waitFor(seconds: 1)  
ev3.move(forRotations: 1, leftPort: .b,  
rightPort: .c, leftPower: -50,  
rightPower: -50, brakeAtEnd: true)  
ev3.waitFor(seconds: 1)  
ev3.move(forRotations: 1, leftPort: .b,  
rightPort: .c, leftPower: 50, rightPower:  
50, brakeAtEnd: true)
```



This is a Swift function which is similar to the EV3-G Wait block.

It has one parameter, *seconds*, which is the number of seconds to wait.

Tap the *seconds* parameter, *Float*. Choose 1 from the picker to make the program pause for 1 second.

The function should look like this:

```
50, brakeAtEnd: true|  
ev3.waitFor(seconds: 1)
```



Run the program. The robot should move forward by one rotation, pause for one second, move backward for one rotation, pause for one second and move forward by one rotation again.

Great job! We've come to the end of the lesson. In the next lesson we'll make the robot turn.

If you wish to know more about me and what I do, feel free to visit my company website, <http://tomafuwi.tumblr.com>, like my Facebook page at <http://facebook.com/tomafuwi>, or follow me on Twitter at https://twitter.com/shah_apple

All the best and take care.

#

Select all the code you've typed in so far, and copy it. Tap below the existing code and paste.

LEGO® Architecture Skylines

By Iva Pavlić

The LEGO® Architecture Skylines series was started in 2016 with three sets: 21026 Venice, 21027 Berlin and 21028 New York City. After the success of these first sets, 21032 Sydney, 21033 Chicago and 21034 London came out in 2017. This year the Skylines were back early, with 21039 Shanghai. A Las Vegas Skyline had also been announced but was not released. The reason behind this decision lies in the tragic event from October 2017 in Vegas: a man fired at a crowd of concertgoers from the 32nd floor of the Mandalay Bay hotel. Thanks to the number killed and injured, the event will be remembered as the deadliest shooting by an individual in the USA. Mandalay Bay hotel was to be a part of LEGO®'s Las Vegas Skyline.

The Skylines sets are not skylines in the true sense of the word. Instead, each is made as an ideal combination of the city's best-known buildings. Just as the Landmark sets, they are the ideal souvenir for each of the represented cities. The idea is obstructed only by the fact that they are all globally available. This theme has been an ambitious one from the beginning: truly some of the most characteristic buildings (and monuments) have been included and, more often than not, their main features are well represented at such a small scale.

21028 New York City

New York is the most densely populated city in the USA so it is not surprising that its Skyline is made up of corporate skyscrapers: One World Trade Centre, the Chrysler Building and the Empire State Building, the (somewhat lower) Flatiron Building and the inevitable Statue of Liberty.

Two of the buildings in this Skyline have already appeared as Landmarks: the Empire State building, to which a part of the article in our last issue was



dedicated, and the Flatiron Building. The Landmark Flatiron Building was transformed into brick well: framed by Fifth Avenue and Broadway, its unusual shape was cleverly built in tan and dark tan. In the Skyline version, in order to fit with the rest of the buildings, the shape itself was a priority so it is among the less recognizable buildings in the set.

The Empire State Building is one of earliest sets in the Landmark series. It is built with few details and almost entirely with tan bricks. The shape's successful representation makes the building instantly recognizable. In this set, not only the shaping is perfectly built, but also the building's characteristic facade with its vertical lines captured using grille tiles. Slightly more detailed is the very top of the skyscraper, making it the most recognizable, best designed, and for sure the most beautiful building in the set.

The most ambitious building in this Skyline has to be One World Trade Centre. Take a look at the real building, with its reverse triangles and cross sections going from square

at the bottom to square at the top, but octagonal in the middle, and you will be in doubt as to whether the simple, precise and original geometry could even be transformed into the LEGO® world. The result of the attempt is a very nice, elegant skyscraper, with a combination of grey and sand blue, built using a SNOT technique. The volume is built in four separate pieces: the lowest two are rectangular, the third is an attempt to capture the octagonal shape using slopes, and the fourth is again rectangular, but rotated 45° relative to the base, with an antenna on top. Although the basic geometry of the building was attempted here, it is a good example of the limitations of LEGO® bricks at such a small scale. The skyscraper is recognizable only after thinking about the similarities between the geometries.

21034

London



London is one of the world's most visited cities and contains extreme cultural diversity: 8.5 million people living in London speak over 300 languages. London is here represented by the National Gallery, Nelson's Column, Big Ben, the London Eye and Tower Bridge. These buildings are all connected with the city's rich history and culture.

Apart from the buildings, there is also the Thames, represented by transparent tiles under Tower Bridge, with a boat sailing down it. Tower Bridge is raised at set times for specific boats, and it can also be raised in this model: the lower level is built using clip tiles and handle plates. The upper level is the famous walkway, and in reality it has a glass floor. The characteristic light blue railing is simply tiles with a vertical tooth in the middle, where the Coat of Arms of the City of London stands. Apart from being movable, Tower Bridge is also suspended. The steel plates are built simply, but faithfully. In the characteristic colour (medium blue), a soft axle is attached via a handle at the top and a clip at the bottom of the bridge.

The leftmost part is the National Gallery. The columns of the portal are made out of vertically placed white grille tiles and are slightly offset with their own pediment, while the wings are inset. Above the centre part, behind the gable is the

The Chrysler Building's shaping is also captured well, but the alternating transparent and opaque plates make it seem much more transparent than the original building. Magnificently built is its famous art deco top, which at first glance might seem impossible to build at such a small scale. Sitting atop four 1×1 cones is a round jumper tile, on top of which is a travis brick with a round brick, another cone and an antenna. Tooth plates turned upwards are attached to the side studs of the travis brick, and with the 1×1 round brick they create the characteristic top with its stepped curved arches. The Statue of Liberty is recognizable not only by the microfigure in the well-known green hue, but also by the finely built shapes of the base, using the smallest of tan plates and tiles.

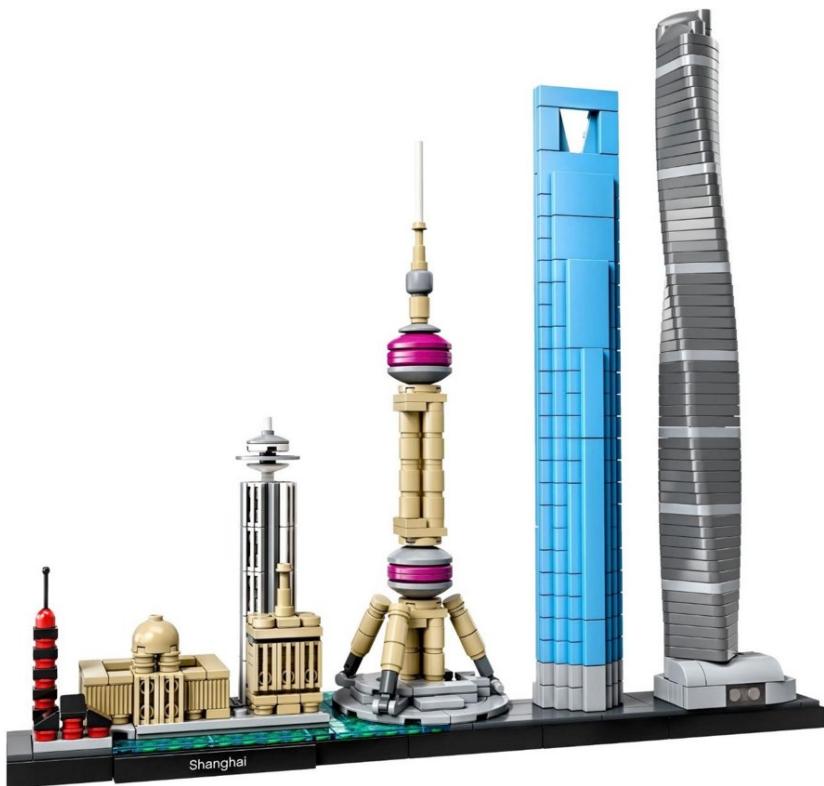
recognizable dome. Built this way, it is the perfect model of a classical building, made recognizable also by the piece of Trafalgar Square and Nelson's Column in front of it.

In my humble opinion, one of the two best and most original builds in the Skylines series is the London Eye. Mostly Technic pieces are used here, and without them such an ambitious miniature would not be possible. The eye stands on two Technic wishbone suspension arms, slightly offset to create the triangle joined by a pin at the top. The wheel is brilliantly simple: an ordinary transparent plate and two clip tiles are attached to the two lengths of hose to represent each of the passenger capsules. This creates two rails that make up the wheel, joined by angled connectors at the bottom and pins at the top. There is a total of 16 capsules, whereas the real one has 32, each of which represents one of the London Boroughs. A bar connects the angled connectors to the base of the main support.

Big Ben is built out of grille bricks which represent the vertical ornamentation of the tower. The clock is a 2×2 brick with a print of the real thing. The Landmark Big Ben's biggest weakness was the clock, and it is a pity such an excellent print was not used there as well. Big Ben appeared as a Landmark (21013 from 2012), a part of the London Skyline, in some Cars sets

from 2011, and also as the spectacular 2016 Advanced model 10253 with 4163 pieces. So Big Ben is a building that LEGO® designers have now equally successfully built out of 50,

350 and over 4000 bricks. The same goes for Tower Bridge, which is here around 230 bricks, and over 4200 in the 2010 Advanced model 10214.



the Oriental Pearl Tower, a radio and TV tower with a futuristic look and eleven large and small spheres sitting on three columns. The first and the largest has a diameter of 50 metres (164 feet). The base of the tower is very elegantly built, yet the supporting columns are just three times two 1×1 round bricks. On top of them is a magenta and light bluish grey sphere, cleverly built out of dishes. Above it are again three round-brick columns, while the smaller spheres, located between them, are not present in the LEGO® version. The upper sphere is also built out of dishes. The tower ends in a round brick and a light bluish grey minifigure head, atop of which is a telescope with a bar. The best part of the building process is the end: two round bricks on a bar, completed with a round tile on one end and a bar holder with clip on the other. The clip is attached to the base, while the upper part rests against the plate below the first sphere. Albeit with a great reduction in the level of detail and with a repetitive use of elements, the tower is splendidly built and recognizable.

The Radisson Blu Hotel is built by attaching rail plates with grille tiles to travis bricks. This represents the ‘webbed’ body of the skyscraper well. On top is the rotating restaurant with a glass dome, built out of dishes and other round elements. The Shanghai World Financial Centre is a prism whose two opposite edges are split each into two curves, which are then connected at the top, below which is a trapezoidal opening. Thanks to this design, the skyscraper was nicknamed “the bottle opener.” Just as with the One World Trade Centre, the shaping here is impossible to fully capture in bricks at such a small scale. In the Skyline, the Shanghai World Financial Centre is an elegant skyscraper with a light bluish grey bottom, attached to the base with clips, and a medium blue top. It is gradually narrowing towards the top with the use of a large number of jumpers, from four studs to one stud in width. The same pattern is repeated on the reverse side, using plates. The model itself is nice, the colour choices are great—even the bottle opener look is there—but although it is somewhat closer to the original than One World Trade Centre, it is not a complete match.

The Shanghai Tower is the tallest building in the world, at 632 metres (2073 feet). It is built on 70-metre concrete pillars in order to resist typhoons and its shape is so aerodynamic that it reduces wind loads by 24%. The LEGO® Tower is built from thin Technic 3×3 quarter circle liftarms. Fifty liftarms are stacked around two axles and then turned by hand to produce the irregular, aerodynamic and almost organic look of the tower. The model is made stable thanks to a central axle, which is independent of the ‘outer shell’ of liftarms. The structure is topped off by Bionicle teeth with axle holes. In my opinion, the Shanghai Tower—thanks to its seemingly simple yet spectacular organic shape made with Technic parts—is one of the best models in any Skyline set, right up there with the London Eye.

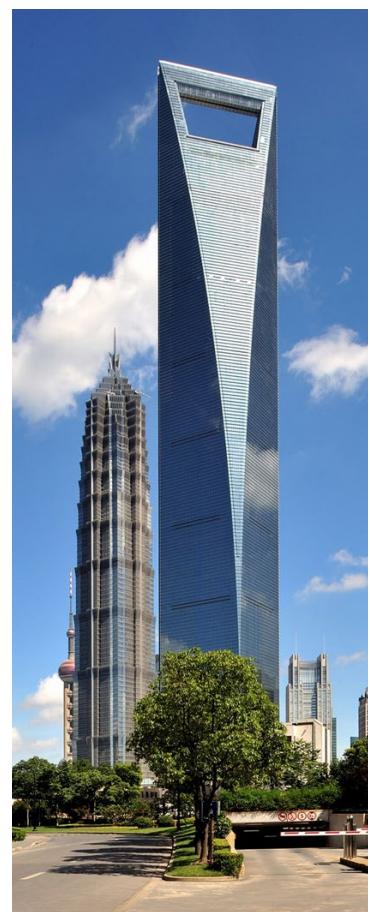
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21039

Shanghai

Shanghai is located at the Yangtze river’s mouth. Thanks to its location, in recent years it has become one of the biggest and busiest harbours in the world. The rapid development is most evident in the urban architecture: Art Deco buildings are combined with the ever-growing number of contemporary skyscrapers.

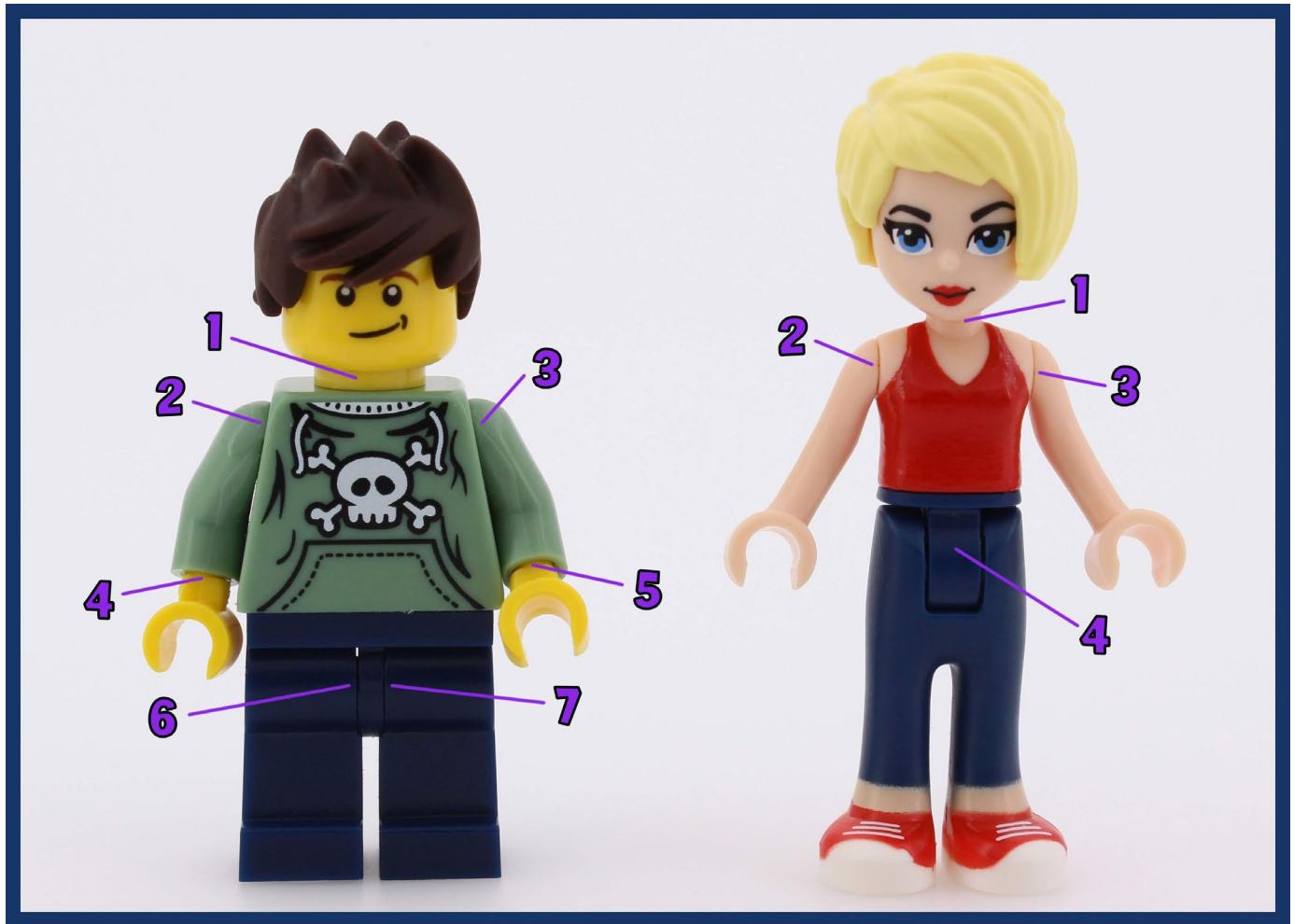
The City God Temple and the Longhua Pagoda are the two small structures at the far left side of the skyline. The Pagoda is as simple as it gets, built from alternating red round and black regular 1×1 plates and a tiny antenna on top. The 15th century temple and the 10th century pagoda are a part of the traditional Shanghai architecture. The neoclassical HSBC Building and the Customs House are a part of the Bund, a waterfront area along the bank of the Huangpu river. The HSBC building is built in a similar fashion to the National Gallery in London: the facade is grille tiles, and above them is a dome. The difference lies in the wings, which are here built with grille bricks. The river is built out of trans-light blue tiles, and on the opposite bank is



Minidolls vs Minifigures

Strike a Pose!

Autor: Jasna Bronić Miklin



Today we'll answer who can strike a pose better – the minidolls or the minifigures?

Both minis have their strengths and weaknesses when it comes to movement. The strengths come from joints and the weaknesses from a lack thereof. A minifigure has seven points of articulation, whereas the minidoll has only four. Is that enough for the figs to win this battle and possibly even the war? Because at the moment, the minidolls are winning 8:6.

We'll start the analysis with the head. Both the figs and the dolls can rotate their head 360°. Most real people can't do that, but it's a remarkably useful feature for horror stories. That earns the minis their first point today. It's 1:1 on the scoreboard.

The arms on both minis have a shoulder joint that allows them to do the backstroke. True, a luscious hair piece can get in the way of that for a minidoll, and even the head is an obstacle for the minifigures, but still they both get a point. So far, the dolls and the figs seem to be equal.



It's time for the minis to show us their hands. Quite literary. The dolls can't move them and that causes many complications in their daily lives. Everything from eating to riding a bike can be a real challenge. In contrast, the minifigure hands rotate. That doesn't mean they never experience problems, just that they have fewer of them. And with that, the figs take the lead - 3:2.



The legs hold the biggest differences between the minis regarding motion. The minifigures 'wear' legs that swing independently, but also skirts and legs without any joints. Since the 'independent legs' body part is the most common one, we'll use it for the comparison. The movable legs are not only great for walking, but also allow the fig to sit or lean back.



The majority of minidoll legs parts have the same range of motion, but they move exclusively as one, from a standing to a seated position. So, they can only do the most basic yoga poses and can't lean back. Needless to say, that puts the dolls



at a disadvantage while running away, for they can only hop or glide. The figs solidify their advantage in this battle with 4:2. But we need to acknowledge some weaknesses before we can crown the winners of the war.

Notice that neither the dolls nor the figs are capable of nodding or tilting their head, rotating the torso, bending their elbows and knees, or many other actions that are common abilities among humans. All these shortcomings in mimicking an average person, reveal how similar the minis are to each other.



And the end result shows that: The war ends with a 10:10 draw. Neither of the minis is better than the other. They are different, and made with specific end goals in mind. The minifigures have a wider range of movement and a more rectangular aesthetic. The minidolls use a wide variety of body part molds to look more like humans.

Which one is better to use on a project? Depends on the project. For a medieval stop motion movie, you'll most likely want to go with the figs. For a lifelike sleepover display, you'll probably want to use the minidolls. But just because you can leverage a particular mini's strengths doesn't mean you have to. Play and build with whichever ones you choose. And don't be afraid to mix them while battling a dragon or enjoying the sun – they are both toys designed to be played with.

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This article is also available as a video on the BrickoMotion YouTube channel: <https://youtu.be/UNfxzYmjPMY>



LEGO® Animals

By Kristijan Vuletin

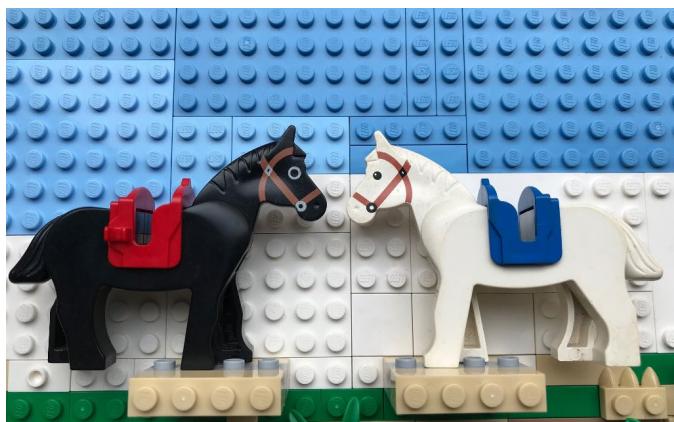


Which came first: the chicken or... the horse? Or was it Fabuland? It may not be the question of all questions, but the first animal to appear in a LEGO® set was – a horse. It was way back in 1984 in the Castle theme. But let us go back further in time: if we want to be 100% accurate, the first animals appeared between 1979 and 1989 in Fabuland. We are not talking about pure animal figures here, but rather a blend of animal heads and humanoid bodies. These lovable figures were featured on the first pages of LEGO® catalogues, and just looking at them will for many of us bring back fond memories of entering the world of the brick.



Source: <https://hiveminer.com/Tags/fabuland%2Cminifig/Recent>

Now it is time to move on to 'proper' animals and the way they entered their LEGO® life. As stated above, the Castle theme brought the first animals—horses—in 1984. At first they were black and white, while the brown version came somewhat later, in 1986. They remained unchanged for almost a quarter of a century, only to receive a minor facelift in 2010 – the eyes were altered. From a black circle with a white outline, they became more 'realistic', and since 2013 they have also had movable rear legs.



Other animals did not appear until 1989, when the Pirates theme brought in monkeys, sharks, birds and octopuses. Although the first bird (from 6270 Forbidden Island and 6285 Black Seas Barracuda) was a parrot by shape and colour, the same mould has since been used as a generic bird and has appeared in many colours.

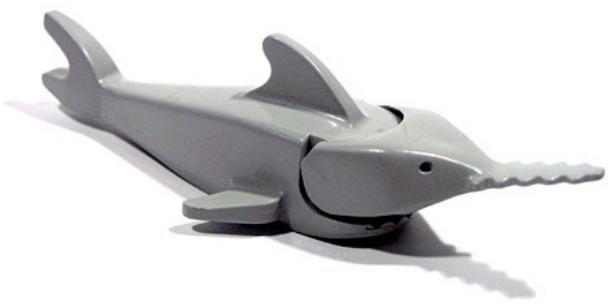


Belville spawned cats and dogs in the nineties, and they have appeared in many themes as well as many colours, ultimately becoming a part of the standard LEGO® System themes. Just as with many other animals, their roots can be traced to Fabuland.



(one of the "I'm ready to eat now" cats and the police dog from 2011)

Thanks to Aquazone (1995-1999), more creatures of the sea appeared: dolphins, sawfish and mantas.



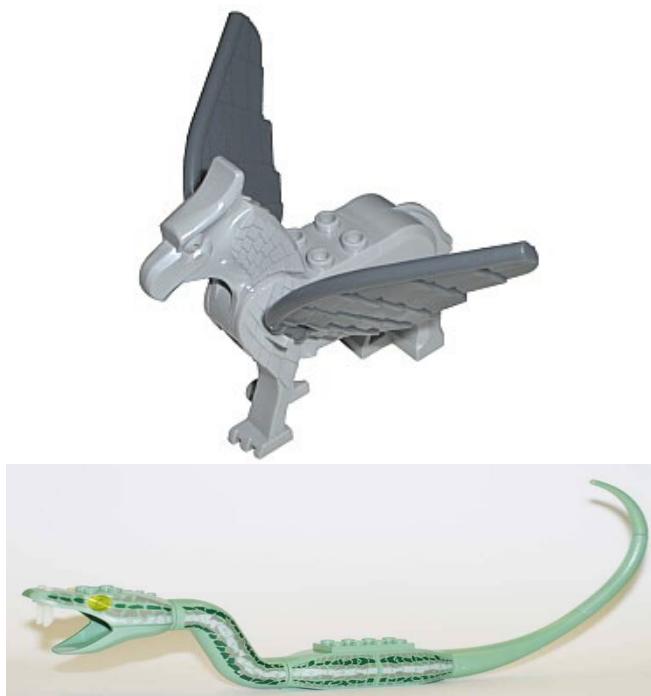
As for small animals, the nineties brought crabs, scorpions, spiders, snakes, starfish and bats.



All animals mentioned are single pieces, apart from the sawfish, which is basically a shark with a different upper jaw. The more complex animals from the 90s era are the dragon and the crocodile.



The new millennium has seen quite a bit of novelty in the LEGO® world, in the company itself and also in the animal kingdom. TLG signed a contract with Warner Bros, which marked Harry Potter's entrance into the brick world. Harry brought with him some new mythical creatures, such as the Hippogriff, the Hungarian Horntail, and the Basilisk (or Fluffy) – the three-headed dog.





Animals, in a more traditional sense, from this era are rats (in Harry Potter since 2001), frogs (Belville, 2000), elephants (Adventurers, 2003), polar bears (Arctic, 2000), wolves (appearing in many themes since 1976; later known as police dogs) and cows (since 2009).



In the Vikings theme from 2005 we got three new dragons, and the interesting thing about them is that they were designed specifically for these sets and not meant to reappear in another theme.



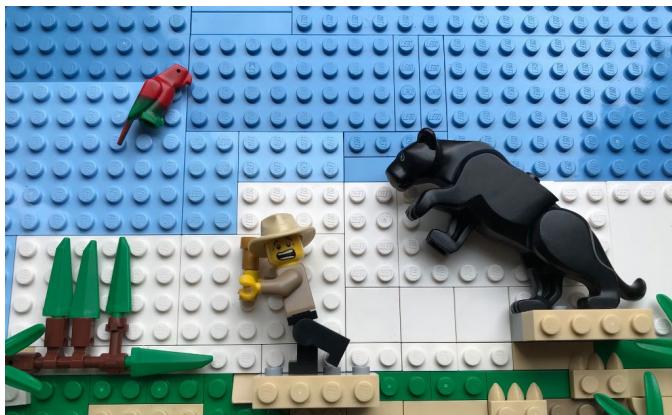
Speaking of design exclusives, one of the rare animals (if not the rarest) designed for a single set is the lemur from 3828 Air Temple, appearing only in this 2006 set.

One of our nightmares' worst residents have to be sharks, and they have been living in the LEGO® world since 1989's Pirates.



Apart from appearing in another colour (white), sharks also had a redesign in 2008 in the Agents theme.

In 2017 in the Jungle, a subtheme of City, the newest animals of the LEGO® world are black panthers, mountain lions, tigers



and leopards.

LEGO® dinosaurs have come in many editions through Dino Island, Dino and Dino Attack themes. Dino Attack was known in Europe as Dino 2010, and the name was not the only difference – instead of huge weapons, these sets had hooks



and cages for catching the dinos

Finally, dinosaurs were also a part of the Studios theme, which was launched in 2000 and focused on stop-motion films.

Looking at the fourth iteration of the popular T-Rex, it is hard to imagine that the first time it ever appeared in a set was in



1997... in DUPLO.

So as you see, LEGO® animals have grown not only in numbers, but also in shapes, colours and through tiny improvements. For many they are often the main reason to buy a set, and the value of several have grown over the years thanks to rarity or large demand.

#

LEGO® World Copenhagen, February 15-18, 2018

By Eduard Petrac

Images by kockice, Maico Arts and Human Media Lab



The beginning of the year is typically slow and boring. Everything is still grey, we're recovering from cold days, and nature is slowly waking up from its winter hibernation. That's how LEGO® events around Europe unfold – they appear shyly but are perfect for unveiling new MOCs built during winter. That's how we came to LEGO® World in Copenhagen. Traditionally the first large event of the year, this year marked its tenth anniversary edition. It was four days of total joy for visitors of all ages.

Like every year, LEGO® demos all themes that are currently in production. Sometimes you can also see a presentation of something exclusive, but this time, we haven't had a chance





to see anything spectacular. With one exception! We know already that there are DIY solutions that allow you to connect LEGO® parts to drones. But this year LEGO®, in cooperation with 'The Human Media Lab', presented its 'flying bricks'. Via a LEGO® console, which uses sensors and gyroscopes to track every movement of the user, it allows control of a swarm of mini drones that present a shape of bricks constructed on the console itself (Photo 1). The assembled console gets scanned with computer vision and directs the drones that can basically imitate any shape and movement of the user. Really impressive! It's hard to estimate if and when would this reach standard production, like Boost and Mindstorms have done, but it shows one vision of what the future of playing with LEGO® may look like.

Among the more interesting exhibits, one can point towards a large collection of historical LEGO® sets which, apart from here, can also be seen in Billund at the LEGO® House (Photos 2,3,4). Also, there was a section featuring building in the Architecture theme, full of nice work by the visitors (Photo 5). Mindstorms® and Boost were particularly

popular, allowing the visitors to take part in programming and playing with the models. Everyone could find something after his own heart. All areas were swarming with visitors, even those focused on classic 2x4 bricks in multiple colours.

Then there was an impressive life-size McLaren 720S model (Photo 6). And where else could one 'bathe' in LEGO® parts or build from a bag of freshly manufactured bricks and minifigs? Crazy good!

So, strolling from one zone to another, there is also the Fan zone.

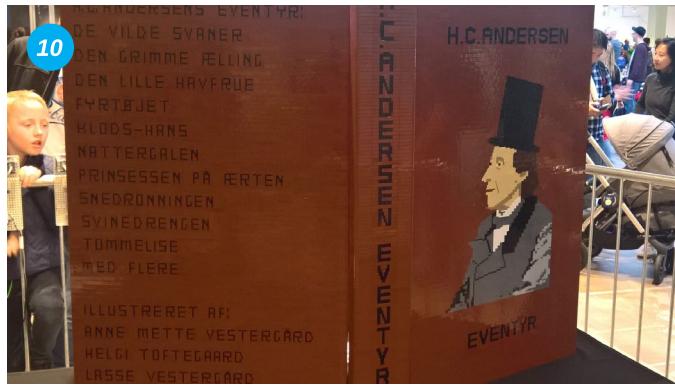
Each year, AFOLs from around the world strive to bring the best and nicest of their works, but an anniversary event asks for something special. So there were plenty of MOCs this year that drew one's breath away.

As much as 1800 square meters covered with works by 59 attendees from 10 countries. It would be hard and unfair to single one builder out from among the many prominent AFOLs present, but some have been rewarded as the best – the first place according to the choice of the attendees was won by Jessica Farell ([Brick.ie](#)) from Ireland with 'Jurassic Brick Dinosaur Diorama Series models' (Photo 8), while the best work in the group





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City diorama was awarded to Arjan Oude Kotte from the Netherlands with 'Brickton Harbor' (Photo 9). Pictures tell more than words, anyway. (Photos 10-18).

To complete the celebration, the GBC team has, for the tenth anniversary, prepared all its modules for the main event of the



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weekend – setting a new Guinness Record for the largest number of GBC modules. Maico Arts, Ben Jonkman, Klaus Hansen, Lasse Deleuran, Brian Soholm Larsen and Elena Dimitrova assembled 259 modules into a single build, which the ball passed through in 40 minutes. Congratulations! (Photo 19).
#



Space Interview

By Kockice

Wandering around the 'Bricktastic' event halls we stumbled on some of Britain's finest space AFOLs, Jason Briscoe, Gary Davis, Rhys Knight and Peter Reid. Let's try to find out if they have anything new to share with us – some new project or collaboration perhaps?

Kockice: So guys, first something about yourselves, a tiny bit maybe? The infamous 'dark ages'?

Jason: Sure, I mean it might take way too long to explain how it worked in my case, as I was active in the community for a while and then had a ten year relapse...

Rhys: Yeah, well Peter really never had a dark age. We seem to have pulled each other out of our dark ages.

Peter: (laughing)

Jason: For me, Classic Space and the first LEGO® Technic sets were my favourite things when I was a kid. There were some other items on the menu but you always get back to the things you really like the most.

Rhys: Same here, yeah. It was something that caught your eye immediately.

Peter: Yeah, for me it was the Galaxy Explorer (928) that got me going. Sort of sent me on my way.

Gary: We would also need a fair amount of time for my case...

K: As Classic Space builders, do you feel that it appeals to only a certain type of audience, reminding them of the old, better times? The 'romantic' ones?

Rhys: Yes, I think so. A lot of people who aren't AFOLs and who played with LEGO® as children recognize the symbol immediately.

Jason: I think it's different things to different people. There are those who have to have all the Classic Space sets that were ever made and catalogue them. Which is great, but that's not really where we are. So, taking the romanticism as a point, it's the future that could never be or could have been.

Gary: I had one build displayed in an LBR Store but I'm not a typical Classic Space builder. I just liked Jason's idea very much. And about the appeal, it's about what was popular when each of us were children. It all goes back to that. So, yes you could say it's a romantic thing, sure.

Rhys: The reimagining of what Classic Space theme would be like now, exploring the unknown. A different style, a different level. There is a lavish background to Classic Space. A lot of background work, And of course we have Peter.

Peter: Yeah, true. (laughing)

K: So building Classic Space, do you feel most rewarded by the public? How does the Community respond to your work? Do you think if you changed and built something else, they would change how they feel? You're all great builders.

Rhys: We might do that. But we would just revert to Classic Space eventually. No need to go out of our comfort zone for too long! We've got a clear colour pallet and we actually don't have to think too much about the hows and whats.

Jason: It's like your old comfortable pair of shoes. You always go back to it. But I like the idea of putting in some new perspective to Classic Space. Hence my mix up of the white with trans yellow as seen on a few of my MOCs like the 'Mooncat'.



Gary: I really enjoy all my work that gets displayed to the public. Of course we build for ourselves, but it's always great to get positive feedback.

K: So, the display! Who are we missing here; who else is also a contributor? With all the extra details and lighting, it's one of the stars of the show. Can you share how you all came up with the idea?

Jason: Tim Goddard, Alec Hole and Andrew Hamilton are not here today. But originally, it's Peter's idea. He wanted to do something different, a bookcase thing. The idea was there and we were socializing in Skaerbaek when Kevin Gascoigne mentioned that we might do something spectacular for this years 'Bricktastic'. And in that conversation I was appointed as the project manager! Here I have to mention Jeremy Williams, as he was also a culprit for the whole display. We were returning home from that same Skaerbaek when ideas started flying around about the huge tower and the underground. The project seemed to be growing with each sentence (laughing).

K: Well, I guess you have the last word in the whole project, Jason? How were the guys with following the criteria?

Jason: Sort of. It was all very easy going. I gave the guys enough slack to just do what they wanted. But we wanted to show that it's not only the Bricks to the Past team who can do something big. Compared to their huge displays we lack the size. And theirs are historically accurate and of course high quality – we couldn't match that; not the way we wanted to do it. So what we couldn't make with physical size we made up for with details. So it's all about the detail.

Rhys: We all got 'boxes' and dimensions to fill in, and we literally did whatever we wanted! That easy. Of course, as long as it's Classic Space.

Jason: I mean it's not like we don't know each other. If it was with some guys you haven't met and don't know, it would be a difficult project to handle. Well, if I may, one thing that was 'imposed' as a standard was the sliding doors – such a cool design, easy to make, simple – that actually was Alec's idea.

Gary: As Jason mentioned, there were no strict rules. I simply followed the brilliant work of Peter Reid and it ended up being amazing. It's always nice to have flexibility when building.

Rhys: I was doing my part and I was keeping all in the loop and sending pictures to the others, then getting the feedback and continuing the work.

Jason: We have put in a lot of effort to show how much detail you can put in that space. And it's really appealing to the crowd. They go by the display, stop for a bit and then keep staring and finding details for ten or more minutes. The yellow highlighted wheels are a cool play feature by Alec – turning them left or right opens and closes the sliding doors between the modules.

Rhys: Especially the flashing lights. It's mesmerising to most. Creating a super-detailed display was our goal. In limited space. I didn't really think that we would have that much interactivity with the crowd.

K: Does the inspiration come from TV series or comics? Something special this time?



Rhys: Sci-fi for the genetic laboratory for instance, where experiments are done. Or a Tesla-styled generator. We really got a lot in those 'boxes' (laughing). I mean the whole feel of the display is like an homage to most Sci-fi.

Jason: It's like something you really wanted to make as a kid but you never had the bricks or a chance to do it.

Gary: Since I like Gerry Anderson's shows, there are some references to those shows.

K: Any particularly difficult parts of the project? Anything that made you so frustrated that you would consider leaving the project?

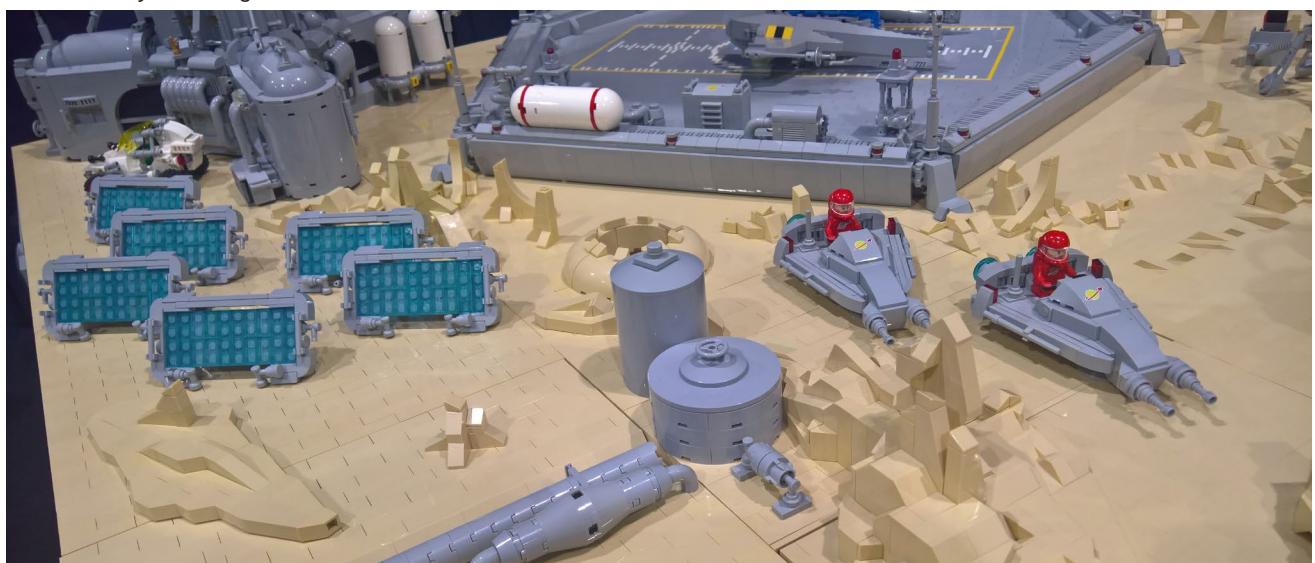
Jason: No, nothing that serious. Well it was a bit tiresome making the tan landscape.

Gary: Ah, yes. It was the rocket lift! It took me ages to get it sorted out with all the different types of rail systems, and I couldn't quite get it going. But the current system – which is quite simple, and I'm sorry I didn't use it originally – is one with the technic rack (BL ID 2428).

K: Does the building go smoothly? Or are you easily distracted, like when the neighbour's dog is endlessly barking?

Rhys: We all create on our own. But I need a bit of noise when building. When I'm working on Sci-Fi I like to have some Sci-Fi on the TV. Sort of a background noise. Because it's people talking, it makes me feel like I'm in the environment with other people. I listen to a lot of YouTube videos and channels. It makes me feel like I'm not on my own, and I might see a technique that I can use.

Jason: I can't have the TV on. I get easily side-tracked from building. But the radio on the other hand, if it's the right music and gives me the rhythm, it's great.



K: Considering it's a fairly large project, did you have any issues with sourcing the pieces? You must have large collections but you still can't have enough LEGO® .

Gary: We qualified for Project Support by LEGO® for this display but the order still hasn't come (laughing), so we had to resource it all by ourselves.

Jason: We had some issues with the tan for the landscape – reaching out to members to borrow some. And grey (laughing). It's amazing how many bricks a project this size can handle.

Rhys: The most used part would probably be the curved macaroni tube (BL ID 25214). I have an order that hasn't arrived yet so I had to leave room for them when they arrive. And I finally got to use the pearl gold ingots (BL ID 99563).

Jason: What a great part those curved macaroni tubes are... I love them.

Gary: Paint roller (BL ID 12885) from the CMF series was greatly used.

K: How did your families react during the time taken creating the display? You must have gotten in the way at some point.

Rhys: My wife is happy that she got her kitchen table back! (laughing). She's very pleased about that. But I did only a small part of the display, a corner one. So when expanding I will go for the bigger module. I've got plans for what I want to do.

Jason: I've managed to keep it in one room so I was blessed. Not too much of a hard time.

K: Do you already miss all the bricks that are in the project, trapped, crying for a new project?

Rhys: I've got no grey tiles, or plates. None left. All gone. I went for the plates and less bricks.

Jason: It's taken a fair dent in my situation. But I'll manage.

K: So the 'boxes' were initially Peter's idea, building in them. There was obviously a plan for the whole idea.

Jason: Well we had some difficulties with the boxes, and for next time we know we have to leave some extra room for brick tolerance. Incorporating the lighting was also quite challenging. But we managed to create the perfect depth for the crowd to see everything we came up with.

K: How are you satisfied with the end product – now, after the first day of attendance and reactions?

Rhys: Considering it was a very loose project I think we've pulled it together quite well. It is our first time, the first step on a bigger journey and improvements are always possible.

Jason: Peter was our 'quality control' guy and pretty loose about it. There was no special micromanaging. Like I've mentioned before, it was about letting guys do what they want. It was a bit of a panic during setup, since the Tower broke on the journey up here. But the number of comments up until now is rewarding and will help us to go bigger next time.

Gary: There was an idea to motorise the doors to open, but I think it's better this way. The public can play with it and it's been pretty popular this weekend.

K: So the future of the project is quite bright. How long do you plan on keeping it alive?

Rhys: Well, we haven't actually discussed it yet. It's all been so loose until now. But it will grow. We'll refine what we currently have and start from there.

Jason: We're still considering having it travel around to Skaerbaek or Paredes de Coura, but nothing final yet. We will definitely alter it for future shows. Probably see if Luigi (Priori) can join us. We can use eight modules more I think, for starters.

Gary: I will definitely get more work done on making the rocket hatch open and eventually making the rocket come out. Or get it to work with LEGO® Mindstorms. We'll see.

Rhys: It would be cool to fit it on a pallet. Much easier to transport and setup. That's also something to consider as a next step.

K: Are there other builders out there, doing Classic Space, who drive you to be better?

Jason: Sure, I mean Soren (Johansen) makes great stuff. I respect his work, and Luigi (Priori), great stuff with incredible details in his scenes. Simon Liu also, plus many others I follow on Flickr.



A tall, detailed LEGO model of a space station or orbital module, featuring a blue and white color scheme with various scientific instruments and equipment. It is displayed on a yellow table against a dark curtain background.

Gary: Yeah, Soren's work at Skaerbaek last year was quite impressive.

K: It would be great to see you guys all collaborate in the future.

Jason: Yeah, I mean of course. Even here, there are quite a few people engaged. But maybe for Skaerbaek or Paredes de Coura we will go beyond UK collaborators with our display.

K: So we wish you good luck and hope that more AFOLs will be lucky enough to see it in person!

#



Japan BrickFest 2018

By Richard Jones

Last June I visited Japan BrickFest 2018. The fourth Kobe Fan Weekend took place on Rokko Island, in the port city of Kobe, near Osaka and Kyoto. Organised by Edwin Knight and members of the Kansai LEGO® Users Group (KLUG), this event is a LEGO® hub event for Asia. Exhibitors attended from all over the world – predominantly countries from around Asia, but the USA and Australia were also represented.

I arrived on Friday afternoon and set up in one of the two gymnasiums used for the display, accompanied by the majority of builders visiting from overseas. We shared the space with the Great Ball Contraption, a brick built monorail and a train layout.



NEXO Classic Space by Richard Jones

LEGOLAND Japan had a display, and there was also an area to get your hands on some bricks and just build! The other gymnasium had many exhibitors from around Japan, and a theatre had larger scale models from members of the Kansai LEGO® Users Group.

I had taken my NEXO Classic Spaceships. (Imagine the 1978-79 Classic Space sets built with NEXO Knights elements and colours.) This was the third time I had displayed them this year, but the first time they had travelled more than 1000 km from home. I set about the task of discovering how my models had survived at the hands of international baggage handlers, as well as with myself bouncing between multiple railway stations.

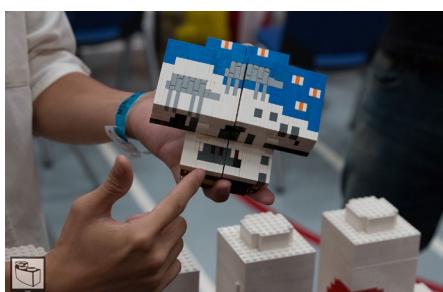
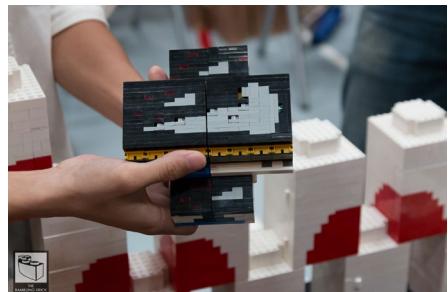
I set up my terrain and installed the lighting. Everyone I met was extremely friendly, offering words of encouragement as my various models were unwrapped in more pieces than I remembered them being in when I wrapped them up.

In the name of ergonomics, I would get up and walk around for a few minutes between rebuilds, though in reality I was stealing the chance to look around some of the other exhibits in the hall: mechs were gathering next to me, tanks behind me as well as next to me, and beside me were some amazing bricks that opened and unfolded, and played air guitar. In between were an amazing array of characters.

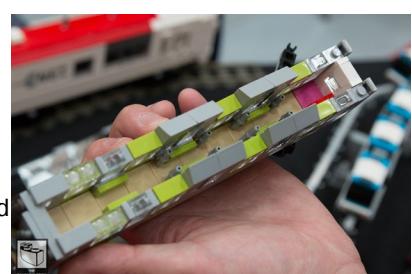


Character builds dominated the exhibition halls: some were BrickHeadz, many were not. Unfortunately, I had no idea who many of them were. Some were from manga and anime, others from history and video games. Some I suspect were from real life. There was a remarkable level of attention to detail for relatively small models, and I think there are a number of factors which contribute to this.

I had the good fortune to be sharing a small compound with Mech Master Lu Sim and other members of PhLUG (Philippine LEGO® User Group); and some exhibitors from Taiwan, including Will Ho with his amazing folding constructions, and Chris Yu with his Neo Classic Space Moon Base.



Let me digress: at the Australian shows I've attended, it is common for an individual's exhibits to spread out a little: it is not uncommon for one or two people to set up their own town display, spreading out over several tables. If you live in a three bedroom house, it is easy to give a large exhibit a trial run, with only the occasional loss of major items of furniture such as the dining room table, or the living room floor. In many large Asian cities, I suspect space is at a premium. You cannot spread your MOCs out over the house if you wish to carry out some of life's essential activities such as eating, sleeping and washing. And it became apparent that many models produced were more compact than those we might see at our local shows.



As explained by William Wong, a LEGO® train builder from Hong Kong, "My workshop is smaller, and so I am now working on trains which are three or four studs wide... Sometimes the four-stud-wide trains have a proper interior and can take a minifigure".

As well as smaller layouts, many MOCs I saw were character-based – not necessarily in a BrickHeadz style, but perhaps a similar scale. Mecha and giant robots were also plentiful, along with outstanding Bionicle creations, which were larger and more dynamic than I had ever seen before. Rather than spreading out, these were spreading up! The majority of landscapes or buildings were built over a baseplate or two, rather than a couple of tables, although there were a couple of models and layouts on display that could certainly be described as ‘just a little bit epic’.



An amazing mecha displayed by one of the members of Brick Mech Avengers. This creation stood nearly two feet tall. I love the parts usage for the lower legs.

Another point of difference compared to shows I had attended in Australia was the labelling of displays: We often have a MOC Card – a display card with such details as the name of the builder, the MOC and the part count. There was no formal process for this at Japan BrickFest. Many builders brought their own, but they were just as likely to have a business card or postcard with a photograph of their MOC and a link to high quality images of their MOCs in online galleries.



Examples of the cards given away by exhibitors to help you locate their other work online.

Jacky Chen, a member of the AFOL Engagement team based in China, had a meeting with Ambassadors for the Recognised LEGO® User Groups and Recognised LEGO® Fan Media in attendance. It was a terrific opportunity to meet representatives of LUGs from around the world, as well as renew friendships with people I had met previously. We discussed the focus of some of the LUGs represented, as well as plans for the near future. A particular highlight for me was to catch up with YouTubers Joshua and John Hanlon from Beyond the Brick, as well as Jun Weng from Brickfinder.net, to discuss life as LEGO® Fan Media.

During the weekend, a number of workshops were run for registered exhibitors: a Great Ball Contraption workshop, run by Akiyuki; a ‘Cute Model’ workshop run by Sachiko Akinaga; Mecha Building, with Lu Sim (Messyworks) and Sculpture Building with Schneider Cheung.

There were also speakers from the LEGO® Group: Stuart Harris, responsible for the design of the visitor experience at the LEGO® House in Billund, spoke about his work with the LEGO® Group, and also presented a video about the development of the LEGO® House, which is now available on Netflix.

Frédéric Roland Andre, a senior designer with the LEGO® Group, was also present. Fred has worked on NEXO Knights, Ninjago, Galaxy Squad and LEGO® Star Wars themes, amongst others over the years. Having lived in Japan for a number of years, he has a good working knowledge of the Japanese language, which was helpful in discussions with local builders.

During the exhibition days there were opportunities for members of the public to join in as well, with construction of a mosaic, a Stamp Rally (where kids collected stamps to show they’d explored all parts of the show) and the Brickmaster Competition, which was offering a family stay at the recently opened LEGOLAND Hotel in Nagoya as a prize. Another highlight was the traditional Japanese Drumming Workshop, and the House Band, the Ofuromates, providing tunes for the public to enjoy while wandering between exhibition halls. While most of the visitors to the exhibition spoke limited English, I certainly met a few with whom I could have greater conversation about my MOC. The time is coming to level up and improve my use of languages that are not English. When a few children looked at my model with eyes wide open, and dragged their parents over, I was reminded of what it was all about: sharing the joy of the brick, with people from around the world.

Specifically for the AFOLs in attendance, there was a function on the Saturday night: Dinner, a stop-motion movie festival, unveiling of the event kit and a trivia quiz. With questions ranging from ‘name that minifigure’ (always exciting when the designer of the set in question is on one team) to ‘What colour is the sign on Fort Legoredo?’, a great time was had by those participating. I had the good fortune to be on the winning team along with CK Tsang from HKLUG, and Josh Hanlon from Beyond the Brick. I have been accused of being a little too trivial in the past, but occasionally it can pay off! Our next challenge was to work out the best way to transport the prize set back to our home countries.



Josh Hanlon, Richard Jones and CK Tsang



Event kit

[Fun Fact, half of the volume of the box for 31069 is in fact air. Contents may have settled during shipping, but it provided lots of useful space for transporting other purchases home, with a small degree of protection. But does this mean there has been a slight turnaround on the 'package volume reduction policy' announced a few years ago?]

Sunday provided another day of public attendance, workshops and great company. We would take the opportunity where we could to look at other exhibits around the event. There were so many fantastic MOCs to see at the event that I will only post a few highlights.

Finally, the weekend came to an end: we took the drone-powered group shot, packed up our models and said our final farewells. This was an amazing experience for me: cultural immersion, in close to the same time zone, surrounded by people from around the world with a love of the brick. I must congratulate Edwin and Miki Knight, and other members of the Kansai LEGO® Users group, for putting on an amazing event which has been growing every year. Special thanks to Nathan as well as Edwin and Miki for their kind hospitality while I was attending JBF2018. To the new friends I made: I look forward to meeting you again in the future.



For those thinking of attending, next year's Japan BrickFest will be held on June 8-9, 2019. Registration opens on October 1st: check out the Japan BrickFest website for details. June is the rainy season in the Kobe/Osaka region. Umbrellas can be purchased for around 600 Yen (approx US\$6), from most convenience stores. There are good hotels within an easy walk from the venue. If you are arriving or leaving by Shinkansen (bullet train) there is a bus that runs from Shinkobe Station to the Sheraton Plaza, which is about five to ten minutes walk from the venue. There is also an elevated train line to Rokko Island.

Travelling to Japan with a case full of LEGO® is not without its special challenges, but was immensely satisfying. The feedback I received from both the general public and fellow exhibitors was universally supportive. This is a fun event, demonstrating a diverse range of building styles, and many warm, friendly people. Being in a similar time zone to home

(only one hour behind Melbourne) meant that jet lag was not a significant problem. I would recommend it, especially if travelling from Asia, Australia or New Zealand.

In my experience, LEGO® fan events are a great way to make new friends. Travelling to international events presents even more exciting opportunities, including learning about new countries and their customs. I would highly recommend it as a way to explore other parts of the world.

#

Brickfest Chile 2018

by Chris Brickbauer



Friday, June 1, 9:00pm. We had just received the keys to the Estación Mapocho Cultural Center, one of the most important venues in Chile and one which has hosted events such as ComicCon, among others. But this time it would be a very different party – the guests and bricks which for two days took over the main hall of the cultural center, covering about 3500m².

After checking that everything was in place, the marathon mission of placing the big tables then the tablecloths and protective fences began, so that the nearly 100 exhibitors (including AFOLs, TFOLs and even some KFOLs) could display their creations and collections of LEGO® to the show's visitors.

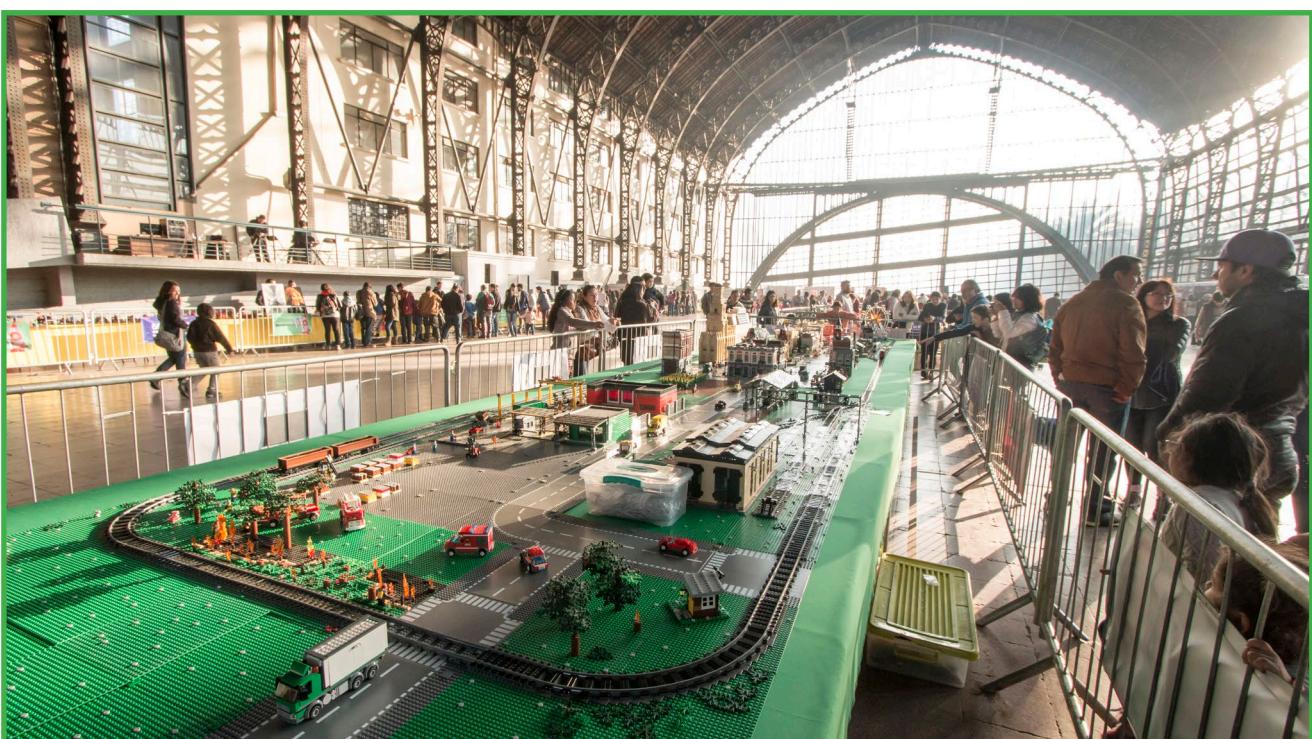
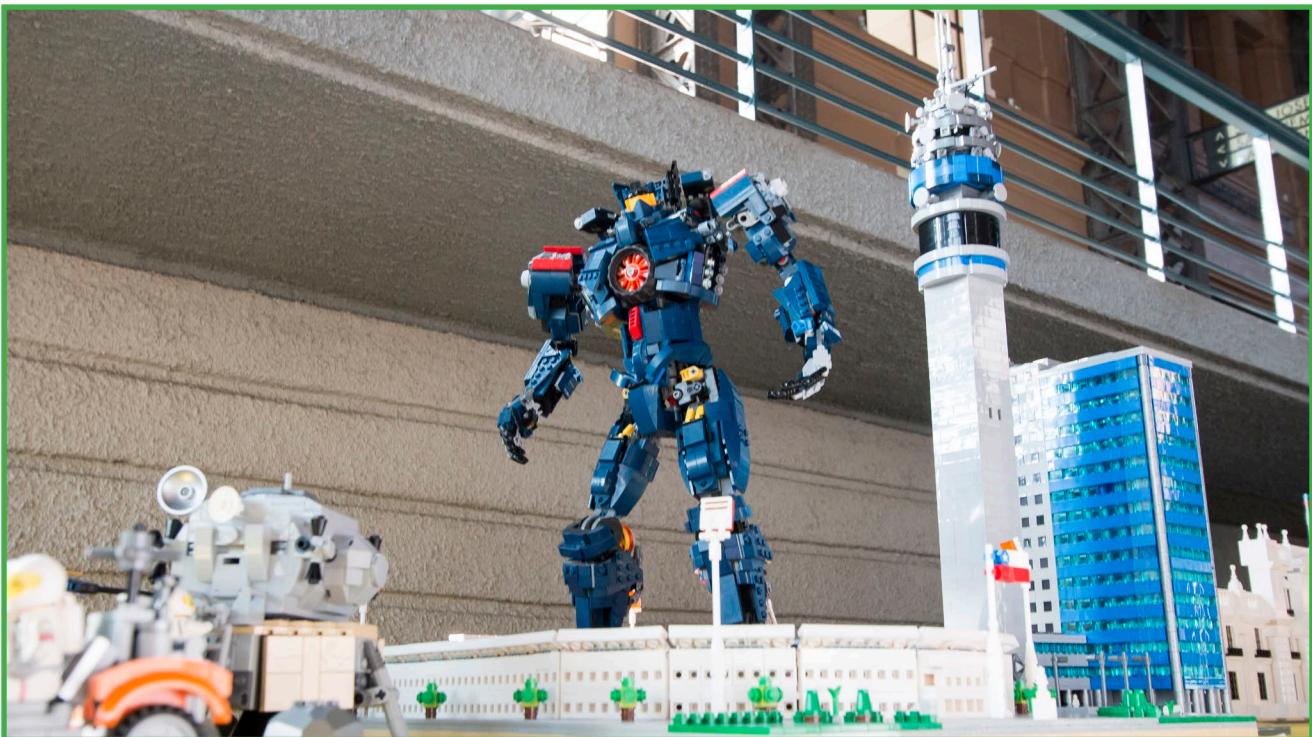
Although this was the 6th edition of BrickFest Chile, the experience was a little different from previous ones. In 2017, when it was held at the Spain Cultural Center, more than 5,000 people were received over the single day of the event. Therefore, this year it was necessary not only to change the venue, but also to expand the length of the show to two days. And it was a wise decision, since we received more than 10,000 people over those two days!

On Saturday, June 2nd, as we approached the event's opening hour of 12pm, there were already many people lining up on the street – children eager to be surprised, and also adults, many of whom have been following the event for years, plus other new friends as well.

During the two days of the event, we were able to share the experience with several LUGs from Chile; ChileLUG, ConceLUG and Phenix Bricks, as well as RLFM (R-Bricks and the magazine Bricks in Bits), and also Alfonso Garay, from Mexico R-LUG, who traveled specially for the event. Some teams from robotics school had the opportunity to participate, including "The Mainstream", who won the national tournament last year, and who also represented Chile in Houston back in April.

We had several MOCs on display, including the five winning models from the Rebrick contest, which will travel to decorate LEGO® House in September of this year, by the AFOLs Luis Peña (two models), Andrés Bevilacqua, Sergio Rojas and Felipe Yañez, along with other incredible MOCs in many different themes.

On Sunday, June 3rd, at 6:00pm, we closed BrickFest Chile 2018, and after taking a group photo of exhibitors, we began to dismantle models and store our bricks for future opportunities. We ended up very tired, but with a heart full of joy and enthusiasm for next year, when we will continue making this the biggest LEGO® fan event in Chile, and certainly, from all Latin America too! #







Reviews

Website Review – EV3Lessons.com

by Jetro de Château

If you have been reading HispaBrick Magazine® for some time you will no doubt be familiar with the Seshan brothers. They have been collaborating with tutorials and other articles about programmable LEGO® platforms since HBM026. Every collaboration has an origin, and in this case the work the Seshan brothers have put into their website EV3Lessons was what sparked their involvement in HispaBrick Magazine®. We have done reviews of many kinds, but never of a website. However, EV3Lessons has recently celebrated a number of accomplishments that merit recognition and what better way to do that than by reviewing the website.

Who are the Seshan brothers?

When EV3Lessons was founded, Sanjay and Arvind Seshan were 11 and 9 years old respectively. They had already been building and programming LEGO® robots for some time and developed their expertise through participating in the FIRST® LEGO® League (FLL)[1]. In the spirit of the Core Values of FLL, they decided to share and work together with others. To do so, Sanjay and Arvind wrote lessons to teach others about building and programming robots, and shortly after taught those lessons at a one-week summer camp. Their bundle of “Ten Easy Lessons to Program your EV3” was shared on a team website and more and more people started downloading the lessons. Spurred on by the interest, the Seshan brothers wrote more lessons ranging from beginner to advanced.



Seshan brothers

Birth and evolution of EV3Lessons.com

In October 2014, the EV3Lessons.com domain name was purchased and all the lessons Arvind and Sanjay had written up to that date were moved to the site. The lessons continued to attract interest from an international audience, and in January 2015 the first lessons were translated into Dutch by a group of students from Eindhoven (The Netherlands). At that point the website had 3000 users worldwide.

Within a year from when the site was launched, the number of users grew to 20,000 in 124 countries. The site had also grown considerably and included specific sections on robot designs, robot design lessons and team building activities. Another innovation to the site was the addition of automated scoring

tools. The Seshan brothers also developed iOS and Android apps for these tools.

2016 saw an increase to 90,000 users in 150 countries and a new section was added: the Coach’s Corner as a blog to help rookie robotics coaches worldwide with tips on how to run teams. The brothers challenged their mother to contribute to EV3Lessons, as their friends and colleagues had done already. Her response was the creation of Coach’s Corner, for which she initially wrote, but later started curating and soliciting articles for. This was a perfect fit for their mother as an experienced coach and youth robotics judge who was (and is) well-connected with the adults in the robotics community. The interest in and traffic on the website accentuated the need for an easy and accessible communication channel for FIRST LEGO® League users which would embody the values and goals of EV3Lessons. This led to the creation of an affiliated Facebook group in January 2017 – FLL: Share & Learn – and a spinoff website called FLLTutorials.com.

EV3lessons website

Currently, the two websites have over 300,000 users from 175 countries. Lessons are now available in 10 languages (English, Dutch, Spanish, Arabic, Portuguese, Greek, French, Catalan, Hebrew and Italian) and scoring tools in 12 (English, Dutch, Spanish, Portuguese, German, French, Greek, Italian, Hebrew, Hungarian, Slovenian and Romanian). All of these translations have been completed by volunteer users from around the world.

The site is now used by schools across the USA as well as around the world. Recently an Italian teacher who was using the lessons decided to translate them into Italian and shared them back to EV3Lessons for all to enjoy. EV3Lessons was also recognized by the FIRST organization at the Showcase Event at World Championships in Houston and Detroit in April 2018.

In June of this same year the site was completely redesigned. You can now read sections of the site in 10 different languages. It has a sharp, modern design and is mobile friendly. You can find programming lessons organised in categories ranging from beginner to advanced (all based on 'EV3-G', the official EV3 programming language). There are also lessons dedicated to combining EV3 hardware with third-party hardware (like the PixyCam, the Raspberry Pi and third-party sensors) and EV3Dev. These lessons are designed for users who want to go further and learn to program the EV3 in different languages.

Each lesson follows a clear sequence. At the start the objectives of the lesson are highlighted. The lesson then teaches the tools required to reach those objectives and sets a challenge. Next, a sample solution is provided and further challenges are suggested. The lessons also use hints to point students in the right direction to achieve a solution. In this way, students quickly absorb new concepts (because they are handed the right tools) and make the learning their own (because they provide their own solutions).

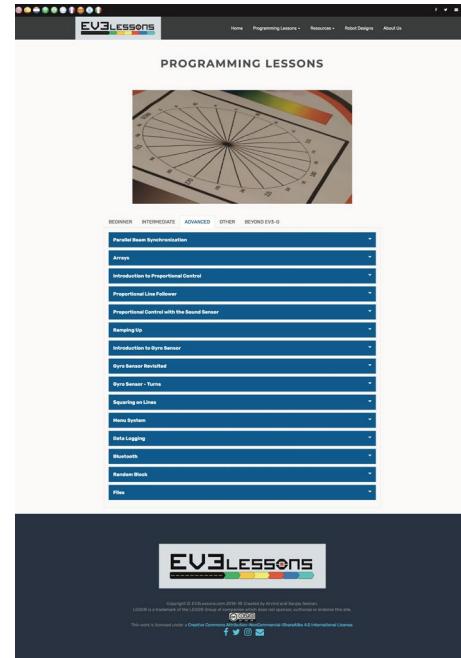
The resources section contains a link to FLLTutorials.com, a sister site that hosts information specific to the FIRST LEGO® League competition. Elements like the scorers and the Coach's Corner have been moved to this site. What stands out is that while the initiative clearly lies with the Seshan brothers, the site has become a hub of information and tools that has a large community not only of users, but also of collaborators. Whether building instructions for projects or lessons, the site hosts quality materials from many sources, including accomplished educators and award-winning FLL teams.

Most of the designs in the robot designs section are education-style models, aimed to provide a starting point and inspiration for FLL, WRO and Sumo competition models. There are also a number of fun builds. Many of the models were designed by the Seshan brothers, but also in this section there are contributions from a range of talented builders. The models fit in with the general mindset this website fosters: gather your tools, follow the hints and be inspired to find your own solutions!

Conclusions

In just four years, the Seshan brothers have managed to build, maintain and expand a website that has become a go-to reference for teams partaking in the FIRST LEGO® League and World Robot Olympiad specifically, and EV3 users in general. The lessons do not provide solutions, but point their audience in the right direction, providing the tools required for the student to solve the mission at hand. The lessons are

updated and improved with the experience and feedback they get from the workshops the brothers run in many schools and from users around the world. This work ethic also explains the success of their scoring tools. These are constantly updated as new information and clarifications of the rules become available. They also work with FLL referees and incorporate their feedback. Collaborators are informed of the changes so that each and every language version contains the most recent and accurate information.



List of programming lessons

There are many sites that provide beginner tutorials, but finding intermediate or even advanced tutorials is a lot harder. In addition, the lessons are short and to the point. More importantly, the lessons are well maintained, ensuring the information is up-to-date and error free. This reliability is one of the main reasons the site has such a great reputation. Whether you participate as a team member or a coach in a robotics competition or just want to learn more about the EV3 programming platform, EV3Lessons should be on your list of go-to places.

[1] If you want to know more about their team "Not the Droids You Are Looking For" and what they have accomplished over the years, visit: <http://www.droidsrobotics.org/>

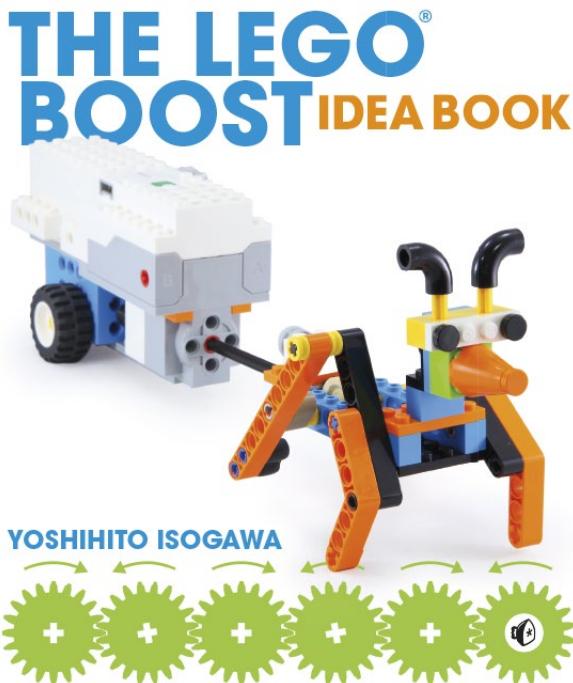
Acknowledgments: I would like to thank Asha Seshan and Marc-André Bazergui for supplying historical and background information.

Did you know the Seshan brothers have recently started a new website called BoostLessons.com? It already contains the Boost lessons they have written for this magazine and based on the quality and reputation of EV3Lessons.com it has all the makings of another must-follow LEGO® robotics resource!

EV3LESSONS

The LEGO® Boost Idea Book

by Jetro de Château



95 Simple Robots and Hints for Making More!

It is no secret that I am a big Boost fan. I have always had a particular interest in programmable LEGO® sets, be it the 8479 Barcode Truck (1997) or MINDSTORMS products. Boost adds a different experience as it is primarily targeted towards a younger audience and uses mostly System bricks, as opposed

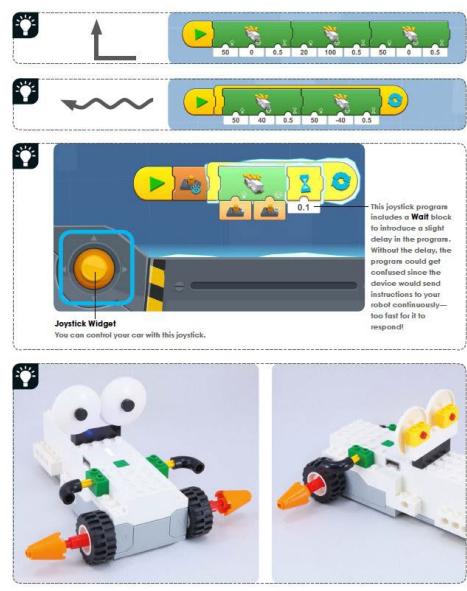
to more complex structures using the Technic system almost exclusively.

In addition, Yoshihito Isogawa is renowned for his simple and elegant designs. He first attracted the attention of Technic-loving AFOLs on a worldwide level with his Tora no Maki [1] (a Japanese expression used to describe a definitive reference system for a particular art). While originally self-published, the book was further refined and published by No Starch Press as a series of three LEGO® Technic Idea Books. Later this was followed up by the LEGO® Power Functions Idea Books[2]. In addition to the many ideas the books contain, they have a very well-defined format and style. The books essentially contain no words (other than a short introduction) and rely on icons to indicate types of mechanisms and the occasional arrow to highlight or describe specific actions.

What both book series have in common is that while the author uses mostly parts that can be easily found, there is no single set that contains all of them. That changed with the LEGO® MINDSTORMS EV3 Idea Book [3] which only used the parts available in the 31313 LEGO® MINDSTORMS EV3 set.

A look inside

The LEGO® Boost Idea Book follows the same concept as the other titles in this series. The book contains a short introduction with some practical advice on the Boost app. The text is accompanied by clear images, ensuring that even if you don't feel like reading you will understand what to do. The rest of the book relies almost exclusively on visual indications. Here and there you will find a short, written explanation. However, in many cases an inquisitive mind will have already guessed or



will quickly figure out what a button or lever will do.

As an example, take a look at the very first activity in the first part of the book (image on previous page).

Like every subsequent activity, it contains a parts list and clear pictures from different angles to show you where the parts are attached. Next there is a small sample code to test the idea. After that the book provides several ideas on how to take this build further. It contains some more code samples and a pictorial indication of what each code will accomplish. The third example is more complex and merits some further explanation, but even just following the images you will be able to test out this idea. Finally there are some additional building ideas to get you started on your own inventions.

The book is divided into three parts. Part 1 (colour coded in blue), which includes the above example, covers "Moving with the Move Hub". Part 2 (colour coded in orange) centres on "Using the Interactive Motor" and Part 3 (colour coded in green) provides "More Exciting Ideas". This part shows you how to launch a rocket, make a steering car, create a drawing machine, or use the sensors that come with the kit.



88 Chomping bot

Conclusions

The LEGO® Boost Ideas Book provides tons of ideas for building mechanisms with your Boost set. It does so in a very appealing and visual way. As the subtitle says, it contains 95 simple robots, and hints for making (many!) more. While the book centres mainly on building, it also includes some hints and explanations regarding programming that allow for more than just basic operations. Among other things it shows you how to create a joystick program, how to control a robot by tilting your smart device, and how to interact with sensors.

The introduction to the book contains some more exciting news. If after working your way through this book you are still hungry for more, you can look forward to the LEGO® Boost Activity Book by Daniele Benedettelli. This book will include more complex building and programming challenges, and will be available in January – so expect to see a review in our next issue!

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[1] http://www.isogawastudio.co.jp/LEGOstudio/toranomaki/en/
[2] http://www.hispbbrickmagazine.com/en/content/review-LEGO-power-functions-ideas-book
[3] http://www.hispbbrickmagazine.com/en/content/LEGO-mindstorms-ev3-idea-book
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# Launching rockets



184 Launching rockets



Launching rockets 185

# Review 75222 - Betrayal at Cloud City

*Text by lluisgib*

*Images by lluisgib and LEGO® System A/S*

**Set:** Betrayal at Cloud City

**Set number:** 75222

**Parts:** 2812

**Minifigs:** 18

**Recommended price:**

349,99€ / \$349,99



Ever since the first Death Star was released as a playset in 2008 (set 10188), there has been a discussion about whether this type of set should be considered to be UCS (Ultimate Collector Series) or not. Those who are in favour argue that these are sets that can't be considered standard sets due to their size and significance. Those who argue against say that they are not large scale spaceship reproductions and are more playsets than display sets.

It appears that after many years of discussion LEGO® has decided to put an end to this controversy and the new Star Wars playset is branded with a new name: Master Builder Series. I don't understand the "Master Builder" concept well, nor the kind of sets that will get this new name. Anyway, I accept the new definition and look forward to seeing how it evolves.

This particular set reproduces Cloud City (Episode V), a scene that hasn't appeared in a LEGO® set since 2003. It is a set that is loved by some and hated by others. We know that this is inevitable. Anyway, the 2003 set still generates a lot of nostalgia and I believe it was necessary to revisit it now, fifteen years later. And after the failure of the 75098 Assault on Hoth playset, I believe this set will reconcile many playset fans.

## Minifigures

The set includes a total of 18 minifigures and 2 droids. Probably the most sought-after figure in this set is Boba Fett, as it emulates the 2003 minifigure and is completely decorated, including printing on the arms. This new and completely decorated version of Boba Fett has only appeared before in the 75060 Slave I UCS set. The only difference with this figure is the expression on his face.



In any case, there are plenty of other minifigures that merit attention. Lando Calrissian is the administrator of Cloud City and plays an essential role in Episode V, both by his treason and his later attempt to redeem himself after seeing how Darth Vader doesn't fulfill his promise. The figure is not the most detailed one in the set, but is still beautiful. Sometimes less is more. It has a cape that is blue on the outside and gold on the inside. It also has two facial expressions on its double-sided head.



Lobot has only appeared in two previous sets – in the 7119 Twin-Pod Cloud Car from back when Star Wars minifigs still had yellow tones, and in the 9678 Twin-Pod Cloud Car & Bespin, a Star Wars Planet Set with a microscale spaceship. The new figure is almost identical to this latter one and only the facial expression is different: the eyebrows have gone from black to brown and there are some wrinkles under the eyes.



The set contains two versions of Leia. I like the one that has a red dress and a white cape. There is a new piece that allows you to make a skirt without using a slope. With this new piece minifigs are the same height whether they wear trousers or skirts. In addition it allows for decoration on both the front and the back as in the case of this minifigure.



The other Leia comes with the suit she wears upon arrival at Cloud City. The decoration is again excellent and full of details on both the front and the back.



There is an Ugnaught operator in the carbon-freezing room. This minifig has appeared before in set 75137 Carbon-freezing Chamber. But in this set, he has different clothes and a different facial expression. The eyebrows are more clearly marked and the beard is brown instead of greyish.



There are also two Han Solos in this set. One wears blue clothes, reproducing his arrival at Cloud City. Outstanding in the decoration of this minifig is the side of the legs, which show the holster for his weapon.



The other minifig shows Han Solo at the moment he is frozen in carbonite. It is curious to see that one of the expressions on the head of this second figure is the same as the expression you see in the carbonite, so you have a minifig with the exact same expression he had when he was frozen.



There are two Cloud Car pilots. These are new minifigures with printing on the front and back of the torso, and a white helmet with red decoration. There are few references to this character, other than action figures and a few frames in the movie. In any case, I think it is a nice figure and it looks good inside the Twinpod Car.



In this set, Luke is dressed in the same suit in which he fights Darth Vader. Again, the figure is very detailed, on both the torso and the legs. Of course he has a blue lightsaber. Although this is probably a character already available in more versions than any other in the Star Wars universe, this one is also excellent.



Next up are the minifigs we already know from other sets, with minor modifications (or none). These include the figures representing Darth Vader, C3PO, the Cloud City Guards, Chewbacca and the Stormtroopers. I won't enter into much detail on these minifigs since there is little to say about them. In any case, the quality is very good and even though these are well-known figures they are still interesting.



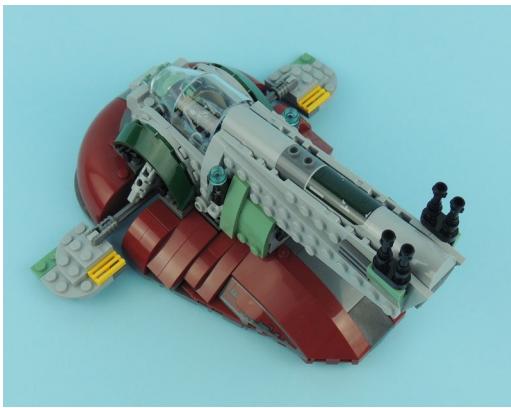
Finally there are the two droids. There is R2-D2, who has already appeared in 41 sets (to some the real protagonist of the saga), and also IG-88, who has appeared in four earlier sets.



## The spaceships

The set contains two spaceships. The Slave I in this case appears at a reduced scale, as it is not one of the main elements of the set. Even so, the shape, colours and finishing are very good. The Boba Fett minifig fits in the cockpit, and Han Solo in carbonite fits in the lower part. There is no access ramp for the cargo hold as there is in the larger scale Slave I set, but there is a space for the carbonite piece.

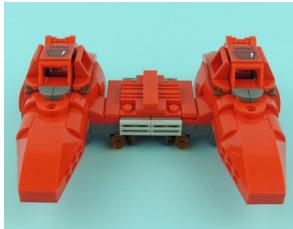
A big effort has been made to stay faithful to the design of the ship and to give it some kind of functionality, including movement of the wings, a cockpit that opens, and the laser cannons. There is also a clip to attach Boba Fett's weapon while he pilots the ship.



The other spaceship is almost unknown. The Twin-pod cloud car has only ever appeared in 2002, so a new version is very welcome. Just like the Slave I, the size here is somewhat reduced. In this case that affects how the minifigs fit inside the ship. When the minifigs are inside, they cannot move at all, and from the outside you can only see their eyes and helmets.



The ship is very well modeled, and has a door in the roof that you can open to put the minifigures inside. The ship is red (not exactly the colour you can see in the movie, which would be lighter), but the orange and dark red details ensure the model is not monotonous.



The second quadrant reproduces Lando Calrissian's chambers. There is a dining room with a table full of food and drinks as well as five chairs. Four of these are standard chairs while the fifth is brick-built and is placed at the head of the table. This room has windows and decoration, including a lamp and a microscale reproduction of Cloud City.



A door leads to a corridor with a fountain and several doors that lead to other parts of the city. This corridor is also decorated with wall lighting and a painting.



## Cloud City

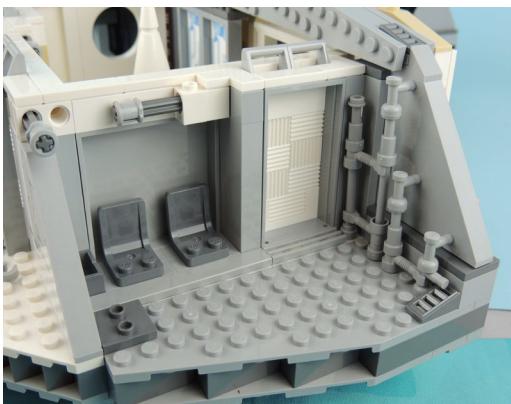
Cloud City is divided into four parts, each one of which reproduces a scene from Episode V, in much the same way as the Death Star.

The hangar where Boba Fett's Slave I is parked is the simplest quadrant in the set. It is a tan platform with a dark tan rim and a courtesy lights. The Slave I fits perfectly on the platform and there is a small walkway that leads to Lando Calrissian's chambers. You can access these through a sliding door, flanked by two walls and courtesy lights.

One of the doors leads to the waiting room and contains a table and two chairs. There is also a large sculpture in the center, made with trans-clear plates. The room also has a plant, and some stickers provide additional decoration.



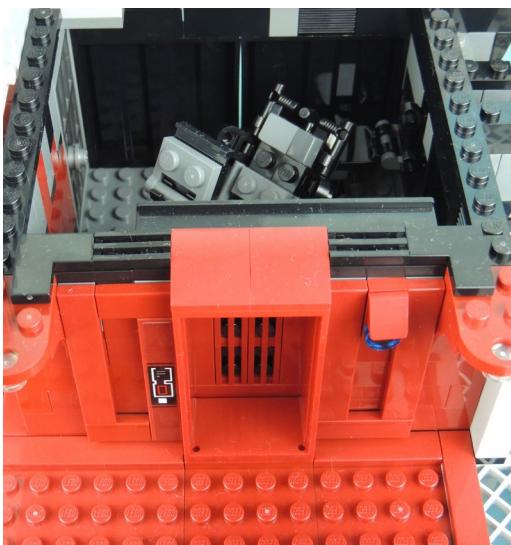
Another one of the doors leads to a small room with some pipes. The official description says this is the waste disposal chamber, but I haven't found any elements to substantiate this.



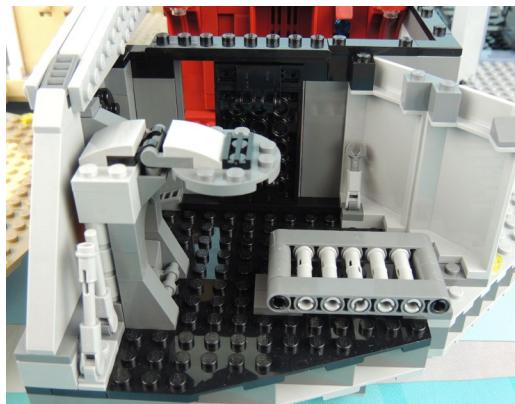
The third door gives access to the Slave I landing platform.

In one corner there is an opening without a door that provides access to the quadrant with the interrogation room.

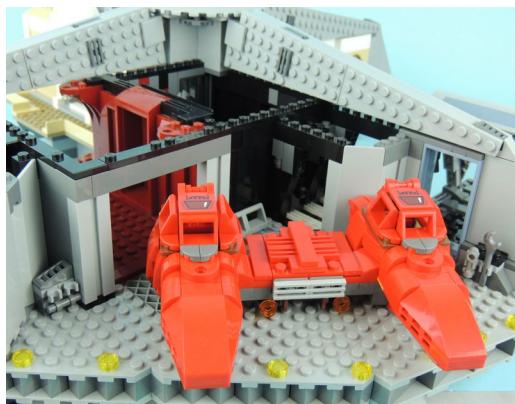
This quadrant, in contrast to the previous one, consists of a corridor with a room on either side. The interrogation chamber contains a torture chair, a stretcher and a small cell. This is the room where Han Solo is tortured.



On the other side of the corridor there is another waste disposal chamber. This chamber contains the conveyor belt for the waste and a furnace to burn the waste. In the movie, Chewbacca finds C-3PO (or what is left of him) in this chamber.



If you follow the corridor without entering either of these chambers, you arrive at the hangar where the Twin-pod cloud car is parked. The car is a tight fit. As a matter of fact, the front of the car protrudes from the structure.



In this area there is a trap door that opens and allows the minifigs to escape through the bottom of Cloud City, as well as two more doors. One leads to the stairs for the carbon freezing chamber while the other leads to the walkway where Luke and Darth Vader fight.



The final quadrant contains the carbonite freezing room. This element is completely different from the version reproduced in the 75137 Carbon-freezing Chamber set. I must admit that I prefer the newer design, as it includes a mechanism to make Han disappear and have the carbonite piece appear in his place. In addition it reproduces the complete chamber (360°), albeit at a somewhat reduced scale.



Finally, we come to the walkway for the fight between Darth Vader and Luke. At the end of the railing there is a set of sensors and antennas which float on the outside of Cloud City. There is also a railing on either side of the walkway. In order to make it 'float', the walkway is supported by transparent panels, and the base is made from black plates. These plates could also have been transparent to provide even more of a floating effect.



## Conclusion

The set is inspired by the same concept as the Death Stars. It consists of a series of small scenes that take place in the same location, in this case belonging to Episode V. In addition, this scene was much desired by many Star Wars fans as there had been no sets related to Cloud City since 2003.

The set contains an excellent selection of minifigs, all with a high level of quality and printing. Many of the minifigs are new for this set. The two spaceships, although small in size, are very well designed. The Slave I was a little risky since there have been many versions over the years. The Twin-pod cloud car was easier, since it had only ever been reproduced in 2002 in a much more blocky version.

The different chambers in Cloud City have been reproduced in a very clever manner. There is a way to access each of the chambers, either through corridors or through doors. In addition, other elements like windows, sculptures and other details have been recreated without using too many stickers, which is much appreciated.

The distinction between UCS and MBS will help fans understand what to expect from a set. Evidently this set is not UCS, but is a playset. In any case, I believe this set is recommendable and adds important scenes for the development of the saga. In order to instead make a UCS-style Cloud City, the set would have to have been similar to the 10143 Death Star II, which would have resulted in a display set at microscale.

We wish to thank LEGO® for providing this set for review. However, LEGO® neither approves nor endorses our opinions.  
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# Review 10261 - Roller Coaster

*Text by lluisgib*

*Images by lluisgib and LEGO® System A/S*

**Set:** Roller Coaster

**Set number:** 10261

**Parts:** 4124

**Minifigs:** 11

**Recommended price:** 329,99€ / \$379,99



It all started three years ago when the Fairground Mixer was launched. A fairground attraction! I think at that moment many of us started fantasizing about having a large fairground with all kinds of attractions, including a roller coaster. In 2016 a LEGO® Friends set, 41130 Amusement Park Roller Coaster, made our hearts jump... would this be the prelude to the long-awaited roller coaster? Unfortunately it wasn't, as it only used existing 4-wide train tracks. In the meantime we got the Ferris Wheel and the Carousel. But a large number of fans kept dreaming of a roller coaster.

Everything changed in December of 2017, when a set from The LEGO® Batman Movie opened our eyes and gave us new hope. The 70922 Joker Manor set included a roller coaster with a new track system and cars. How wonderful! The Joker Manor showed us the system, although for a large roller coaster we still needed additional track sections. We had to wait until June to get the brand-new 10261 Roller Coaster set.

In this photographic report we will show you some of the best parts of this set.

## 1.- The minifigures

The set contains 11 minifigures, including adults, grandparents, and a girl... possibly the most interesting thing, aside from the variety of torsos and hair pieces, is that there are three which are perfect for this set: the scared boy, the dizzy boy, and the girl who is sad because she is not tall enough to go on the roller coaster ride.



## 2.- Access to the attraction

Beautiful. There is a sand track on top of the grass. It starts at the ticket booth from which you can access the attraction after buying your tickets.



The track twists around several of the supports that hold up the attraction. You pass in front of a juice and ice-cream stand which is right in front of a small pond.



At the end there are a few steps that lead to the platform where you get into the cars. There are three gates that lead to the three cars and the control posts for the attraction.



When the ride is over, you go down another set of steps that lead to the other side of the ticket booth, where you can buy a picture taken of you on the first downward ramp of the attraction.



## 3.- The ride

I was pleasantly surprised with the ride when I saw the first video. There is a little bit of everything, bearing in mind that it is a set with limitations on size and cost. After going up initially, there is a downward slope to gain some momentum after which there is another upwards slope and then a bend.



The second drop takes you through a dip that makes your stomach jump.



From there on, there is a 180° bend followed by four downwards ramps and a bend that takes you to the final straight.



The last drop takes you to the platform where you can get on and off the roller coaster.



On this straight track there is a parallel track that can be used to park a second train of roller coaster cars. This track can slide in and out to add this second set of cars to the attraction.



#### 4.- Details

The set is full of little details that only improve what you see at first glance.

The 'COASTER' sign: Following the style of the modular buildings, the sign is built with bricks and breaks the red and blue colour scheme of the attraction with an eye-catching azure and dark blue combination.



By changing the colour of the beehive element, the designers have managed to make candy floss – and in order for the girl to get some, there must be a machine to make it. The set includes a portable candy floss machine that includes all the necessary details.



The trees are built using the new leaf element that came out this year. Using a relatively simple system, with brown flower stems, the designers have created a compact tree that is much more realistic than those which use the traditional plant leaves.



En la atracción tampoco faltan los detalles. Al llegar a la parte superior de la atracción hay un cartel que dice que los usuarios no se levanten. En el primer descenso hay una cámara de fotos para captar la cara de susto.



## 5.- Operation

Although it is hard to describe in a magazine, the operation of the roller coaster is very smooth. During the whole ride, the cars don't lose speed due to friction and they have no trouble reaching the end. There are no shocks of any kind. Possibly the only negative aspect is the first climb on which you can sometimes notice irregularities even if it is perfectly aligned – which is probably due to how the cars don't perfectly connect to the chain.

## Conclusion

Sometimes when you have really been looking forward to something, there is a certain possibility that you may feel disappointed with the result. I think that when LEGO® showed the first video of the roller coaster, the AFOL world was fascinated by the potential this system offers.

During these months we have seen models that use this system to create much bigger roller coasters, to the point where they have adapted the system to make vertical 360° loops.

I believe this is one of those sets where the result is many times better than just the building experience. Building the set is quite entertaining, although there are parts that are just stacking columns and beams. Additionally, you have to pay close attention not to skip any steps or the geometry will be off.

The set is fragile during transport and rather hard to store. But aside from this it is a fantastic set that is full of details, and like any good attraction it can also be motorised. I believe the pros clearly outweigh the cons. Basically I feel this is the best set in the fairground series. I can't imagine what we will see next year, but it will surely be hard to make something that is even better.

NOTE: In this issue of HispaBrick Magazine® you can read an interview with Jamie Berard, which contains an explanation of how the roller coaster system was developed.

We want to thank LEGO® for providing this set for review. However, LEGO® neither approves nor endorses the opinions we publish.

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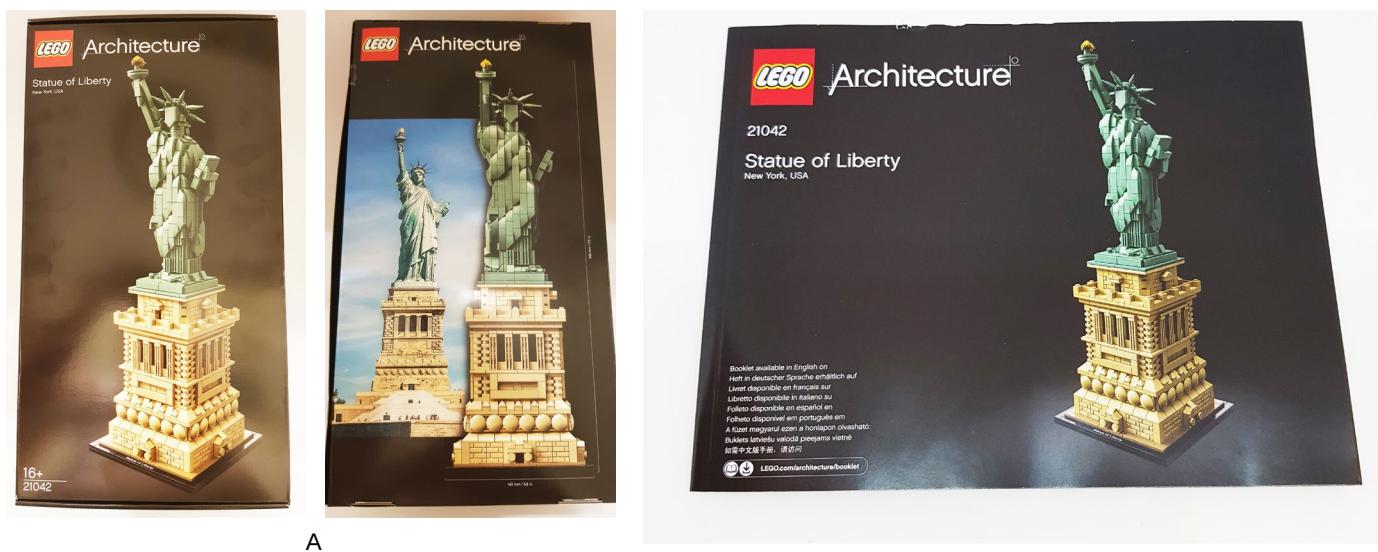


# Review 21042 - The Statue of Liberty The Great Lady

By Vicente Lis (Otum)

Images by José M. Ruiz (Satanspoet)

Among the sets of Architecture planned for this year there is one that stands out especially for being one of the most recognized icons in the world, the Statue of Liberty, and here we have it.



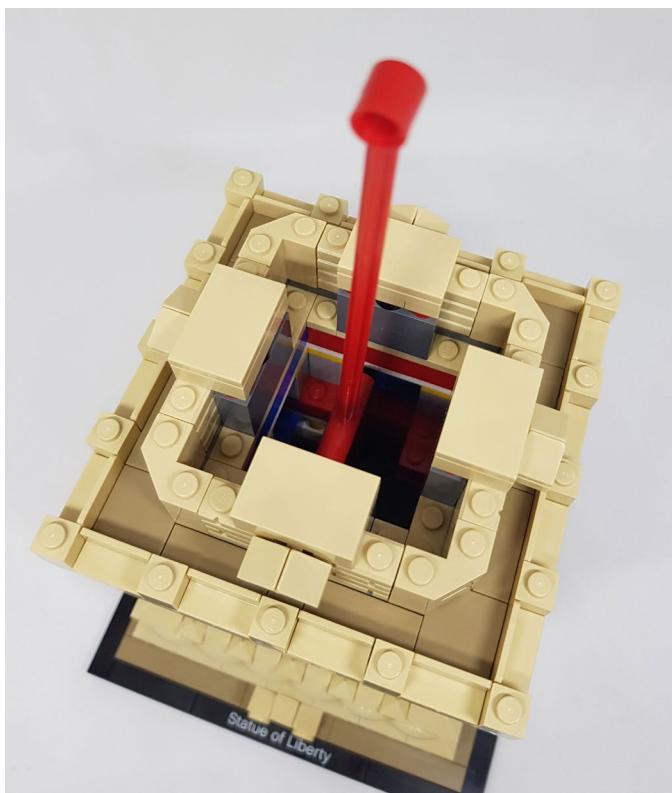
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1685 parts set, it comes in the typical black box of the architecture sets, but this is a great box being a set of this line, it is a box that draws attention for its size. Inside the box we find the bags of parts, a total of 10 bags, three 1x16 Technic link and the instruction manual with a brief historical description of the Statue of Liberty, in several languages, included.

The assembly is divided into five parts, the first part begins with the assembly of the base where the name of the monument is printed on a tile, and approximately half of the pedestal of the statue. It is a fast and simple assembly, where the most interesting is how to get together the square structure of even length with the accesses to the pedestal of odd length and how these are centered, using a simple technique that is hidden inside the pedestal.



The second part of the assembly of the set allows us to finish the entire stand where the statue will rest, it is a moment of assembly where many small pieces are used, most are 1x1 plates and 1x1 round plates to give detail to the set, it is also the part of the set where the assembly is weaker, since the techniques used are not rigid, there are many joints that depend solely on a stud, especially in the lateral ornaments of the pedestal.



And with this we reached the third stage of the assembly process, the main structure of the statue, very repetitive process, consisting of using plates and bricks modified with side studs, which is the secret of the set, and without much more to be highlighted about the assembly techniques, due to this is the part that will be hidden.

The last two stages are the most interesting, and fun of the final assembly, give texture to the statue and dress it with its final mantle. It returns to be a process that is based on small pieces, where many are slopes curved to achieve the feeling of folds in the fabric of the mantle, effect quite well achieved, everything must be said. Two things to emphasize of this last part of the assembly, is how the bent leg of the statue is mounted, and the arm of the torch, getting with the use of slopes that, despite not being a right angle assembly, remain static after assemble all the parts.



To conclude, this set presents two points against, the first is that during the building process the instructions repeated several times and the process of build some parts and then repeat it again about 4 times or five times, especially during the assembly of the pedestal, which is logical if we take into account that it is a square and symmetrical base part. And the other negative aspect is its price, but thinking that the number of pieces (€ 0.07 / pc), the colors used and the final result is a big set being from Architecture, many of us will ignore this information.

The positive things are numerous, it is a global icon, easily recognizable, with an entertaining construction process despite being simple, with colors that give a special touch because they are not common colors, includes the new 1x1 pyramidal slope, and the final effect is a total success, considering that it is not easy to give fabric texture with creases using bricks.

Moral: Whether you are a fan or not of the Architecture line, this set is a great set to have if you do not mind spending a bit of money, it can be a great decoration element on the shelf of any LEGO® fan.  
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# Review 21041 - Great Wall of China

By Jose (Satanspoet)

Pictures by Jose (Satanspoet)

**Set:** Great Wall of China

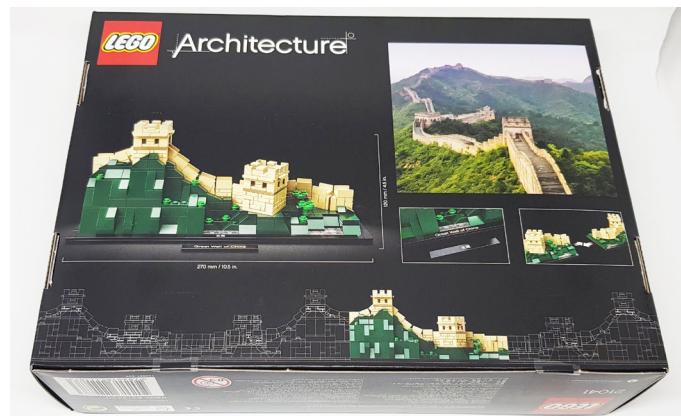
**Set number:** 21041

**Parts:** 551



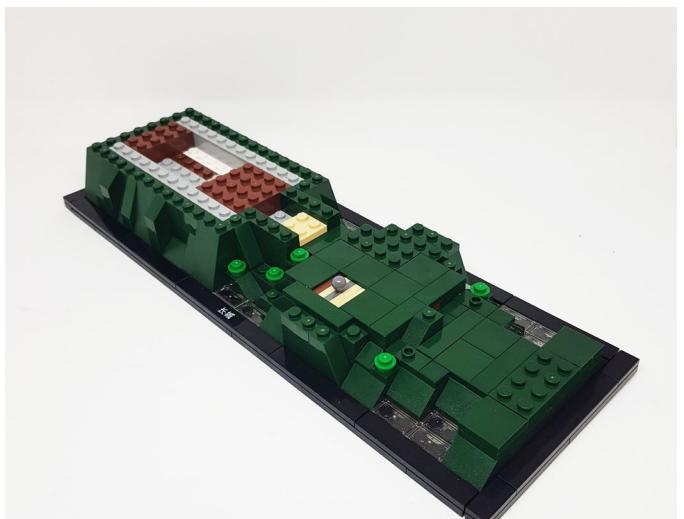
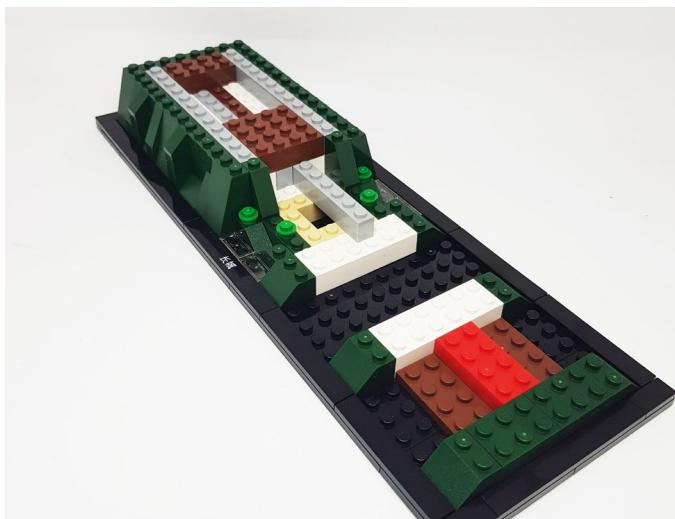
The first set in the LEGO® Architecture theme not to depict a building or a complete structure, and one designed so you can connect several models together to create a larger structure, is the Great Wall of China. The set reproduces two towers of this world heritage site, linked by a winding wall section on a dark green hilly landscape with lush valleys, woods and lakes.

As usual in this theme, the set is packed in a foldable black box with pictures of the set, and the instructions provide information about the design in both English and Chinese. The contents of the box, aside from the instruction booklet, include five unnumbered bags with the pieces for this set.



## Construction

As with most of the sets in the LEGO® Architecture theme, building starts with the base, which in this case measures 34x12 studs. A curious fact is that the printed tiles with the name of the set are provided in both English and Chinese. To start you stack up pieces to create the base of the terrain and the slopes required for the hills. For the sides of the hills, the set uses dark green pieces in order to simulate vegetation. The final result is a pretty solid construction.



Next up, you use more dark green plates to fill in the landscape, and then build lakes with transparent plates, followed by the construction of the first tower. After building the tower, the next part is building the wall leading to the next tower. To this end, the set uses hinges and bars, allowing for inclined and angled connections.



After this you build the second tower, which is connected to a plate with towball, and then the last section of the wall and the final touches to the vegetation and trees.

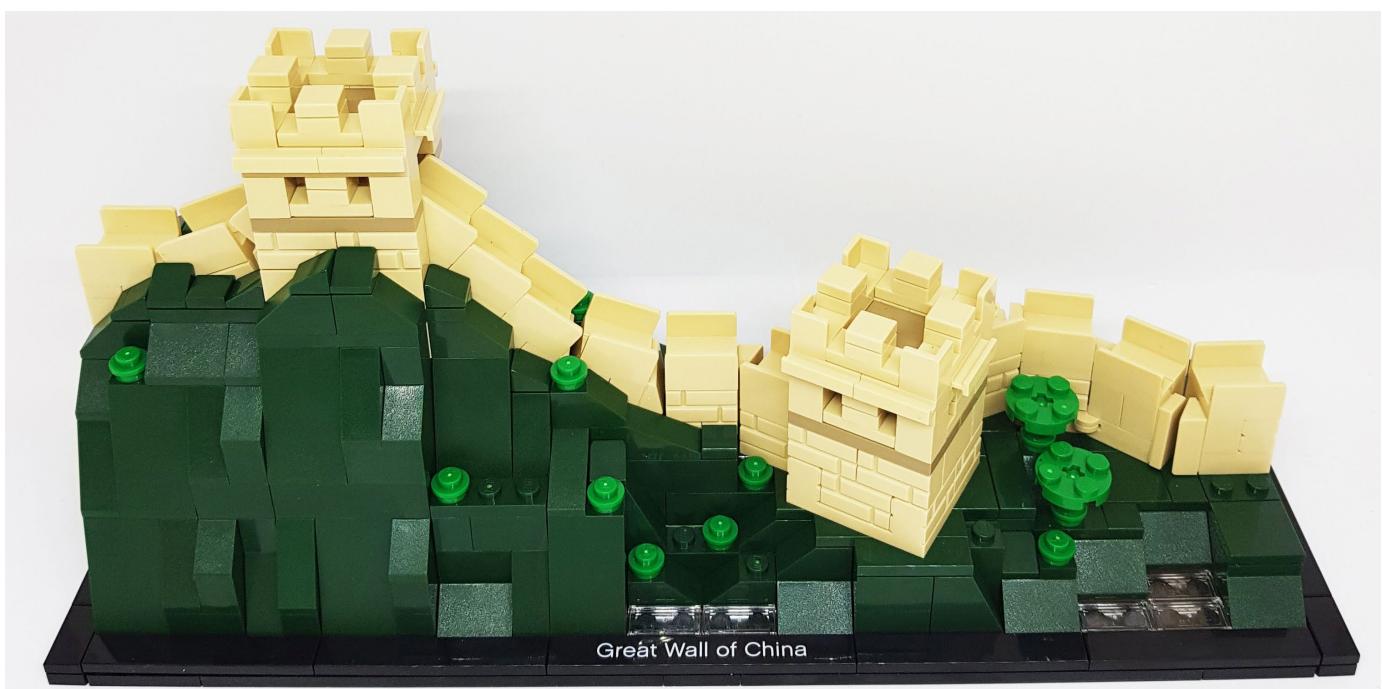


### Conclusions

In general, the look of the set is quite good and the roads and walls that connect the towers capture the essence of this great construction. The set is quite a fast and easy build. An interesting advantage of the set is the possibility of connecting several modules to produce a much longer and spectacular section of the Great Wall, though that would involve an economic investment not all of us would be willing to make :)

We would like to thank LEGO® for providing the set for review. However, LEGO® does not approve nor endorse the opinions we publish about their sets.

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# Benny's Corner by Luigi Priori

## ARTIFICIAL GRAVITY MALFUNCTION AT OUTPOST ALPHA



# Desmontados by Arqu medes



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